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PERSONAL

Mr. Daniel W. Mead, M. Am. Soc. C. E., Consulting Engineer, of Rockford, Ill., has established an office at 605 First National Bank Bldg., Chicago.

Mr. David H. Cochran, Ph. D., LL.D., has resigned his position as president of the Polytechnic Institute in Brooklyn, N. Y., after 35 years of service.

Mr. Harry R. Jones, formerly Contracting Engineer with the Variety Iron Works Co., Cleveland, O., has accepted a position with the Osborn Co., civil engineers, of the same city.

Hon. William R. Merriam, ex-Governor of Minnesota, has been nominated by President McKinley for director of the next census. Mr. Frederick H. Wines, of Illinois, has been nominated for Assistant Director.

Mr. Jose Primelles, formerly of New York city, has recently been appointed Chief Engineer of Public Works of the Western Region of Cuba, comprising the provinces of Habana and Pinar del Rio, with headquarters at Havana.

Mr. Michael D. Wild has been made Secretary of the Baltimore & Ohio South Western Ry. Co., succeeding Edward Bruce, and Assistant Secretary of the Baltimore & Ohio R. R. Co., with headquarters at 2 Wall St., New York city.

Mr. George A. Thompson has been appointed Superintendent of the Delaware Division of the Erie R. R., with office at Port Jervis, N. Y. He succeeds Mr. W. L. Derr, who has been promoted to be Superintendent of the Susquehanna Division.

Mr. F. J. Green, formerly Division Master Mechanic of the Chicago & Northwestern Ry., with headquarters in Chicago, has been appointed Representative of the McGuire Mfg. Co., Chicago, manufacturer of car trucks for electric and steam railways, with offices at 15 Cortlandt St., New York.

Mr. Charles B. Lewis, of the firm of Masters & Co., of Cleveland, O., stone contractors, has withdrawn from the partnership and resumed his professional practice as inspecting engineer at 429 The Arcade, Cleveland. He is also the representative in the above city of the Pittsburg Testing Laboratory, Ltd., of Pittsburg, Pa.

Mr. W. L. Derr, who has been Superintendent of the Delaware Division of the Erie R. R. for some years, has been appointed Superintendent of the Susquehanna Division. He succeeds Mr. J. F. Maguire, who has been transferred to the New York Division, succeeding Mr. W. W. Maguire, who has resigned. Mr. Derr will remove from Port Jervis to Elmira, N. Y.

Mr. William Ledyard Cathcart has been appointed to a professorship in the Mechanical Engineering Department at Columbia University, and will be associated with Prof. F. R. Hutton, the head of the department. Mr. Cathcart began his career in 1873 as Cadet Engineer in the U. S. Navy. In 1877 he was commissioned as Assistant Engineer, and from 1878 to 1881 was with the flagship "Richmond" on the Asiatic station. Returning to America he was assigned in November, 1881, to inspection duty at Philadelphia until January, 1884, when again he had three years' sea duty on the U. S. S. "Ossipee" at the Asiatic station until 1887.. He passed his examination to the grade of Passed Assistant Engineer December, 1884, but, becoming interested in business, he resigned from the Navy. In 1897 he received an appointment as Instructor of Marine Engineering in Webb's Academy, but on the breaking out of the war he volunteered and was appointed June 10, 1898, as Chief Engineer to the Bureau of Steam Engineering at Washington. He will begin duty in his new position in October, 1899.

OBITUARY.

Mr. Fred C. Weir, President of the Weir Railroad Frog Co., died in Cincinnati, O., March 1, aged 64.

Mr. Robin Brydone-Jack, of Vancouver, B. C., Engineer for the trustees of the White Pass & Yukon Ry., died at Skaguay, Alaska, Feb. 22.

Mr. J. E. Parmelee, of the Q. & C. Co., Chicago, died at Kittanning, Pa., March 2, from a congestive chill contracted in the course of his business.

Mr. William S. Rayner, of Baltimore, Md., died in that city March 1. At the time of his death he was President of the Kingwood Gas & Iron Co. and of the Curtis Bay & South Baltimore Harbor & Improvement Co.

Mr. Thomas Hobart died at East Orange, N. J., March 4, aged 80. He was born in Hanson, Mass., and became a machinist. Later he went to Cleveland, O., and there became interested in an extensive iron manufacturing business.

Mr. Herbert Steward, a contractor of New York, died March 5, aged 52. He supervised the construction of the Sixth Avenue Elevated R. R. in New York and built part of the Washington Bridge over the Harlem River.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

NEW YORK ELECTRICAL SOCIETY.
March 9. Secy., Geo. H. Guy, 120 Liberty St., N.Y. city.
CENTRAL RAILWAY CLUB.
March 10. Secy., H. D. Vought, 114 Fifth Ave., New York city.
ST. LOUIS RAILWAY CLUB.
March 10. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.
WISCONSIN STATE CHEMICAL ASSOCIATION.
March 10. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.
MONTANA SOCIETY OF ENGINEERS.
March 11. Helena, Mont. Secy.. A. S. Hovey, National Bank Bldg., Helena, Mont.
GERMAN TECHNICAL SOCIETY OF NEW YORK.
March 11. "Description of the Works of Thomas A. Edison for the Magnetic Separation of Ores," Wilhelm Brendlin. Secy., F. H. Gottlieb, 192 Third Ave., New York city.
THE LOUISIANA ENGINEERING SOCIETY.
March 13. Secy., J. F. Coleman, 712 Union St., New Orleans, La.
ENGINEERS' CLUB OF KANSAS CITY.
March 13. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.
DENVER SOCIETY OF CIVIL ENGINEERS.
March 14. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.
NORTHWEST RAILWAY CLUB.
March 14. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.
NEW ENGLAND RAILWAY CLUB.
March 14. Secy., Edw. L. Janes, P.O. Box 1158, Boston, Mass.
RAILWAY SIGNALING CLUB.
March 14. Secy., C. O. Tilton, C., M. & St. P. Ry., West Milwaukee, Wis.
CIVIL ENGINEERS' CLUB OF CLEVELAND.
March 14. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.
AMERICAN SOCIETY OF CIVIL ENGINEERS.
March 15. Secy., C. W. Hunt, 220 West 57th St., New York city.
BOSTON SOCIETY OF CIVIL ENGINEERS.
March 15. Secy.,S. E. Tinkham, City Hall, Boston, Mass.
WESTERN SOCIETY OF ENGINEERS.
March 15. Secy.. N. L. Litten, Monadnock Block, Chicago, Ill.
WESTERN FOUNDRYMEN'S ASSOCIATION.
March 15. Secy.,B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.
NEW YORK RAILROAD CLUB.
March 16. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.
CANADIAN SOCIETY OF CIVIL ENGINEERS.
March 16. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.
ENGINEERS' CLUB OF CINCINNATI.
March 16. Secy., J. F. Wilson, P.O. Box 333, Cincinnati. O.
SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
March 16. Secy., F. A. Charpiot, P. O. Box 13, Savannah, Ga.
ROCHESTER ENGINEERING SOCIETY.
March 17. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.
THE DETROIT ENGINEERING SOCIETY.
March 17. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.
NORTHWESTERN TRACK AND BRIDGE ASSOCIATION
March 17. Secy., D. W. Meeker, St. Paul, Minn.
CHICAGO ELECTRICAL ASSOCIATION.
March 17. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.
ENGINEERS' CLUB OF COLUMBUS.
March 18. Secy., H. M. Gates, 12½ North High St., Columbus, O.
ENGINEERS' CLUB OF PHILADELPHIA.
March 18. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.
ENGINEERS' CLUB OF ST. LOUIS.
March 19. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.
ENGINEERS' CLUB OF MINNEAPOLIS.
March 20. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.
TECHNICAL CLUB OF OMAHA.
March 20. Secy., J. Harry Lawrie, Omaha, Neb.
ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
March 20. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

ROCHESTER ENGINEERING SOCIETY.—A special meeting of this Society was held on March 3, at which a paper, entitled "Some Examples for Framing in Timber Work," was read by Mr. Wm. F. Jordan.

ARCHITECTURAL LEAGUE (New York Chapter).—A special meeting of this Association was held on March 1. The subject for discussion was "The Beautifying of the City of New York." Mr. C. W. Stoughton also addressed the meeting on "The Developments and Improvements of the Borough of the Bronx."

THE ENGINEERS' CLUB OF PHILADELPHIA.—At the meeting of this Club, held on March 4, Mr. Theodore Spencer read a paper, entitled "Some Problems in Telephone Engineering." This was a discussion of the difficulties encountered in telephone exchanges, central offices and in the various apparatus employed. The methods of overcoming these difficulties were explained. The statement was made that the power required to operate a telephone receiver was so small that a single foot-pound of energy would produce an audible sound for 3,000 years.

NEW ENGLAND WATER-WORKS ASSOCIATION.—The regular quarterly meeting of this Association will be held at Tremont Temple, Boston, Mass., March 8, when the following papers will be presented: "Organisms which Cause Unpleasant Tastes and Odors in Water Supplies," Prof. W. T. Sedgwick; "Some of the Results of the Systematic Examination of the Water of the Public Water Supplies," X. H. Goodnough; "Asterionella: its Biology, its Chemistry, and its Effect on Water Supplies," Geo. C. Whipple and D. D. Jackson; "A Brief Account of an Occurrence of Chlamydomonas Alboviridis," Dr. Frederic S. Hollis and H. N. Parker.

J. C. Whitney, Secy.

ENGINEERS' CLUB OF ST. LOUIS.—The regular meeting of this Club was held on March 1, with 37 members and visitors present.

Col. E. J. Spencer read a paper entitled "World's Fairs," in which the histories of the various international expositions were briefly summarized, and mention made of some of their main features. A large number of lantern slides were shown, illustrating the various architectural and engineering features of the Paris (1889), Columbian (1893), and Omaha (1898) expositions. Mr. Julius Pitzman made some remarks on the prospective Louisiana Purchase Exposition, giving the reasons for holding it and explaining what special legislation was necessary successfully to accomplish it.

E. R. Fish, Secy.

ENGINEERS' CLUB OF CINCINNATI.—The regular meeting of the Club was held on Feb. 16, with 28 members and visitors present.

Mr. M. D. Burke read a paper on "Street Railway Track Construction," in which he reviewed and criticised the various forms of construction. An improvement was suggested, in the line of permanent roadbed, by the adaptation of the concrete block foundation for the support of the rails. These blocks would be made continuous or in sections joined together, 18 ins. deep, 24 ins. wide at the base, and 12 ins. wide on top, to which the rails would be secured by holding-down bolts embedded in the concrete, and prevented from spreading by the use of gage-bars. A modification was also suggested for the disposition of material in the full grooved girder rail now much in use for paved streets, by which a larger per cent. of the metal would be located in the head.

J. F. Wilson, Secy.

THE CIVIL ENGINEERS' CLUB OF CLEVELAND.—At the semi-monthly meeting, held on Feb. 28, Mr. Jos. R. Oldham, Naval Architect, member of the Club, read a paper, entitled "The Rise and Fall of the American Merchant Marine." He said that there was no need of anxiety concerning our lake coast and river trades, as these are in a prosperous condition, and are quite able to take care of themselves. Our foreign trade reached its maximum in the year 1861, at which time our total tonnage was 5,539,813 tons, the British tonnage that year was 4,806,826 tons. Since that time our merchant marine has steadily declined. In addition to the disturbing element of the Civil War in America, there was an equally disturbing mechanical element due to the inauguration of screw propulsion for the ocean trade, which began to be generally adopted in Europe about the year 1860. We then had to import iron, and also had to pay dearly for labor, so we were not in a position to build and operate successfully iron steamers to carry our mails. Forty years ago as much as $200 a ton was paid in London for the steel with which to build a steamer.

Wm. H. Searles, Secy.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.—The February meeting was a "Professional Social," held at the residence of Mr. T. A. Eisen, of Eisen & Hunt, Archs., Los Angeles.

The paper of the evening, by Mr. Chas. Evan Fowler, M. Am. Soc. C. E., was entitled "Bridge Evolution as Relating to Southern California." The evolution of bridges was traced; reference was made to the elegant stone bridge built in France by the engineers of the Ponts et Chaussees, the early English cast iron and wrought iron box girders of which Stephenson's tubular bridges were the culmination. As a more logical example of bridge evolution, mention was made of the development of the modern truss bridge in the United States from the early forms of wooden bridges. The early types of iron bridges used in this country were discussed. Full descriptions were given of the Knoxville arched cantilever bridge and other large bridges of which the speaker was chief engineer.

The deductions made with reference to bridges in Southern California were, that it was not a question of the combination bridge, which is now being built, being the cheapest bridge. Permanent structures of steel should be built. The dry climate of California, which is so beneficial to wooden bridges, would also be of benefit in preserving steel bridges. Only artistic structures should be built. Stone bridges are not well adapted for the wide low rivers or marshes, but Melan arches are better, as the rise could be made much less and the materials for concrete were first-class and always at hand. For foundations concrete piers are much preferable to steel cylinders. The economic span length was discussed, and the reasons given why cheap suspension bridges should not be considered. The paper was illustrated by numerous charcoal sketches, blue prints and photographs.

F. Van Vleck, Secy.

LOUISIANA ENGINEERING SOCIETY.—The meeting of this Society, held at New Orleans on Feb. 27, opened with a discussion of the sewerage, drainage and water supply of the city. A resolution was passed condemning the lack of a sewerage system in New Orleans, and favoring the movement to establish an efficient system of sewerage, drainage and water supply.

Maj. B. M. Harrod, Chief Engineer of the Drainage Commission of New Orleans, read a paper describing the difficulty of improving the South Pass of the Mississippi River. This was a historical review of this pass since 1875, explaining its gradual filling in and the causes for this and the formation of obstructing bars. The improvement of South Pass was considered and the wisdom of such a course was seriously questioned owing to the fact that the South Pass was an abnormal channel, which would require constant vigilance and expenditure to main-

tain. The improvement of the Southwest Pass, the natural outlet of the river, was favored. It was pointed out that three important works would be necessary to complete the enlargement of South Pass, as follows:

1. The increase in the dimensions of the present pass. 2. The construction of works at the head of the pass to control a sufficient proportion of the discharge of the main river to maintain the pass and jetty channel with the dimensions which it will be necessary to give them. 3. The increase of the width and depth of the jetty channel and its extension to deeper water on the sea slope of the bar. The South Pass at present has a minimum width of about 600 ft., and a least depth of 25 ft. Nothing less than a minimum width of 1,000 ft. and a navigable depth of 35 ft. will suffice to give free access to this port to the class of ships which is now largely in use. The enlargement of South Pass might be made either by dredging, or by so increasing the volume and velocity of its discharge that the required width and depth would be secured by the resulting scour. The amount of excavation required for the enlargement of the pass by dredging, on the foregoing basis would be not less than 20,000,000 cu. yds. To increase the width from 600 ft. to 1,000 ft., the banks must be dredged back 200 ft. on both sides. It will be remembered that these banks, as those of all alluvial streams, slope away from the stream that deposits them. It would, therefore, be necessary to control the discharge and scouring energy by preventing its escape over the lowered bank, by forming the earth excavated from the channel into a levee or embankment on both sides.

The scouring method was considered inadvisable owing to the risk of the formation of bars further down and the impossibility of controlling the direction of scour. The cost of improving the South Pass as outlined was estimated at $8,500,000.

NEW PUBLICATIONS.

LITERARY MAGAZINES.—In the February "Contemporary Review" a writer discusses the "Cape to Cairo" railway project of Cecil Rhodes. He points out, what is probably true, that through traffic on such a railway would be almost nil, since freights can be carried far more cheaply by the ocean routes. The writer lays down the rule that, in general, freights by sea are about one-twentieth as much as freights by rail over equal distances. We presume this is on the whole a fair estimate for African railways. It is only in the United States that the railway has been developed to such a degree as to permit the moving of freights over it at a cost as low as that by any except the cheapest water routes. Concerning the proposed Buluwayo-Tanganyika railway, the writer calls it a "popular wildcat scheme." He estimates its cost at $15,000 per mile, its total length as 965 miles, and computes that at the most liberal estimate of the traffic it would be a losing enterprise with a deficit of not less than $2,500,000 per annum. In the same magazine one of the English generals in command of the victorious army at Khartoum answers the charges of inhumanity and needless slaughter after the victory which were made by another writer in the same magazine two months ago. Still another article in the same magazine which will interest Americans is by Sir John Lubbock, discussing Indian currency problems. He holds that the closing of the mints of India to free silver coinage in 1893 was a mistake and opposes the proposition to introduce a gold currency in India. He suggests at the close that the recent great increase in gold production may result in the appreciation of silver.

In the "Fortnightly" for February the question of national supremacy in commerce is discussed by two writers, one English and one American. The Englishman shows that the United States by reason of its eclipsing all nations in the cheap production of steel is in the near future certain to become the great shipbuilding and shipowning nation of the world, and this quite regardless of any subsidies from the government. An article which every American engineer interested in South Africa will want to read is "The War Game in South Africa," in the same magazine. The writer tells us that the boom in Johannesburg is over and many of those who have been seeking their fortunes there are leaving for other fields.

The March "Century" contains an article which we wish to especially commend to every one of our readers who takes the least interest in the present problems which confront this nation. It is entitled "British Experience in the Government of Colonies" and is by James Bryce, the distinguished English scholar and statesman. We know of no more practical and timely contribution that has been made to the current discussion on our own colonial problems than this. Another "Century" article deserving a word of mention here is "Heroes of the Railway Service," in which instances of devotion to duty in time of danger by men in the railway service are appropriately set forth. The war articles in this number include Gen. F. V. Greene's account of his expedition's voyage across the Pacific and the landing at Manila; the last instalment of Hobson's "Merrimac" story, "Cable-Cutting at Cienfuegos," by Lieut. C. McR. Winslow, and an account of the disastrous fight of the torpedo boat "Winslow" at Cardenas.

In "Harper's" for March, Russell Sturgis writes on "The Building of the Modern City House," and the article is as good as one would expect from so distinguished an architect. He tells us how the "high-stoop front" of Gotham originated, and describes the newer and more sensible styles of construction that are succeeding it. He tells us how the increasing use of fireproof materials in construction will alter the planning of city houses, introducing greater simplicity. He takes occasion to bestow well-merited condemnation on the ordinary brickwork of house-building construction and contrasts it with such brickwork as is laid under the direction of competent engineers.

In the March "Atlantic" one of the most interesting phases of service in the late war is described by Mr. Grant Squires, who was censor of cable dispatches in New York city during the continuance of hostilities. It is here for the first time told, we believe, that the news of the destruction of Cervera's fleet on July 3 reached New York at 7.30 p. m. of the day on which the battle occurred. It was not given out to the public, however, until 6 hours afterward, when further messages arrived fully confirming the first report.

The March "Review of Reviews" opens with a sketch of General Otis, and a good share of the magazine is given up to discussing matters in our new Trans-Pacific possessions. The pictures of native Filipinos and their leaders, reproduced from photographs, are especially interesting.

A curiosity in this month's magazine literature is a reporter's sketch of Tripler's liquid air process in "McClure's." According to this story, Mr. Tripler declares that he has run a motor with liquid air which furnished power to make more liquid air—all of which is quite possible; but he furthermore adds that with a consumption of three gallons of liquid air in his motor he produced ten gallons of liquid air in his liquefier. He then proceeds in a jaunty way to expatiate on the "costless source of power" which he has discovered. Why magazines which make claims to reputation should give publicity to such "perpetual motion" promotion schemes as this, passes our comprehension.

In the "Popular Science Monthly" for March, Mr. A. E. Outerbridge writes on the great increase in the production of gold, which he ascribes chiefly to the development of chemical methods for treating low grade ores. He gives some account of the Camp Floyd district in Utah, where a body of ore covering 80 square miles and 20 to 40 ft. in thickness is estimated to contain gold to the amount of $50,000,000,000.

"The Forum" for March contains a study in municipal government—or shall we say in misgovernment—by Prof. Edmond Kelly, of the University of Pennsylvania, in which is explained the method by which Paris has secured its excellent local government. The article is entitled "The Borough System," but Prof. Kelly says that as adopted in the Greater New York the separate boroughs are far too large to be of real usefulness in improving political conditions. In the same magazine, Mr. C. Wood Davis contributes an article supporting Sir Wm. Crooke's position as to the future relations of demand and supply in the world's wheat market. Mr. Davis calls attention to some flagrant errors in Mr. Edward Atkinson's contribution to the discussion of that subject.

In the "North American Review," Mr. H. V. Newcombe writes on "The Opposition to Railway Pooling" and explains that since there can be no real and lasting open competition in the railway business the wisest course by far is to permit pooling under government supervision. Mr. Andrew Carnegie writes on "Americanism vs. Imperialism," saying many good things, but rather overstating his case, it seems to us, as respects the ability of the Filipinos to govern themselves.

REPORT OF THE BOARD OF EXAMINERS OF ARCHITECTS OF THE STATE OF ILLINOIS.—Paper; 6 × 9 ins.; pp. 53. Address Peter B. Wight, Secretary, 1112 Chamber of Commerce, Chicago.

As many of our readers will recall, a law requiring all architects to take out a license and providing a Board of Examiners to pass upon the qualifications of all new members of the profession was enacted by the Illinois legislature in 1897. The first report of the Board appointed under this law has just been issued. It contains, among other things, a complete list of the licensed architects of the state.

THE METALLOGRAPHISH.—A quarterly publication devoted to the study of metals, with special reference to their physics and microstructure, their industrial treatment and applications. Albert Sauveur, Editor. Boston Testing Laboratories, Publishers, Boston, Mass. Paper; 9¼ × 6 ins.; about 80 pp. each issue. $2 per annum; 60 cts. per copy.

This publication was started in January, 1898, and the first volume of 364 pages is now for sale at $4 bound, or $3 unbound. The contents include matter of the greatest value to the progressive metal worker or metal consumer, and much that is interesting to the chemist, physicist and scientist in general. Among the contributors are: R. A. Hadfield, H. M. Howe, G. Charpy, H. Le Chatelier, Baron Juptner von Jonstorff, F. Osmond, E. H. Saniter, A. Sauveur, J. A. Stead, etc. The subjects treated include alloys of many kinds, bibliography of the metallography of iron and steel, treatment of steel and iron, magnetic properties of hardened steels, steel hardening influences, allotropic theory, etc.

WAR NOTES.—No. II. Comments of Rear Admiral Plueddemann, German Navy, on the Main Features of the War with Spain. December, 1898. Pp. 18. No. III. Sketches from the Spanish-American War, by Commander J., translated from the German. Pp. 38. Office of Naval Intelligence, Information from Aboard, Washington, D. C. Both paper; 9 × 6 ins.

The criticisms and comments of Admiral Plueddemann are fair and intelligently made. He praises the high quality and endurance of American ordnance, but finds the navy fuse used defective. In personnel, discipline and appreciation of the proper handling and care of warships, the Americans far exceeded the Spaniards, he says. He thinks that the war did little or nothing to demonstrate the efficiency of warships in bombarding land defences, in torpedo attack and defence, or in blockade and cruiser warfare. He severely criticises the lack of proper material for the landing of the troops at Daiquiri, though this was the largest landing on a hostile shore since the Crimean War; and he also condemns the lack of absolute control, by the navy or army, over the officers of the transport steamers employed. The important question of coaling warships has received a new impulse by the late war, and he says that the lack of appliances for rapid coaling contributed not a little to the disasters of the Spaniards. He terms the coaling of Admiral Camara's fleet at Port Said a comedy. He praises the auxiliary fleet of the Americans, the distilling and repair ships, and says that the war has demonstrated the importance of the government owning transport ships specially fitted for carrying troops and war materials.

The "Sketches" were apparently written by an officer on the German cruiser "Geier," which was in West Indian waters during the war and was permitted to pass in and out of blockaded ports. The author gives his opinions as to the cause of the war; and this he ascribes to both strategic and commercial interests on the part of the United States and to corrupt administration, oppression and systematic robbery on the part of the Spanish authorities in Cuba. He compares the belligerent parties, and praises the individual qualities of the American soldier and sailor, both regular and volunteer. He thinks that the fondness of the American people for outdoor sports has much to do with their endurance and self-confidence in warfare. He credits the Spanish soldier with bravery, endurance, sobriety and frugality, but says that the military education of the officers is superficial. In commenting on the Santiago campaign, he says that the "American navy in every way performed its task in front of Santiago—thanks to the intelligent dispositions of the commander in chief of the fleet and the skill of the American officers and crews." But he caustically criticises the reports of American journals, which destroyed batteries that never existed and leveled others to the ground which were practically intact at the time of the surrender of the city. He describes in minute detail the Spanish batteries at Santiago, and gives the actual effect of the fire upon them. He thinks that Admiral Sampson was too experienced an officer to waste ammunition on these works in an attempt to reduce them and believes that after the batteries were unmasked all subsequent bombardments "were nothing more nor less than target practice"—to accustom his officers and men to sharp firing in actual warfare. He says that in any event the actual result of this practice was—that when the decisive day arrived, "the American fleet was well prepared and able to achieve its task in a brilliant manner and in the shortest possible time." His description of conditions in Havana, Cienfuegos, etc., is interesting; and he cannot understand the indignation of Captain-General Blanco at the signing of the peace protocol, as the Americans held the sea and had only to await patiently for the exhaustion of supplies at Havana and its inevitable surrender.

TRADE PUBLICATIONS

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins. and 9 x 12 ins.)

STEAM SPECIALTIES.—The Reliance Gage Co., Cleveland, Ohio. Pamph.; 6 × 9 ins.; pp. 25; illustrated.

In this pamphlet attention is called to the special forms of "Reliance" safety water columns manufactured by this company.

VITRIFIED PIPE.—Blackmer & Post Pipe Co., St. Louis, Mo. Paper; 6 × 7½ ins.; pp. 18.

This pamphlet describes the company's pipe for sewers and culverts, and its advantages over brick for sewer purposes. Particulars of crushing tests of pipes are given, ranging from 22,530 to 32,763 lbs. Bursting tests are also described, and there are a number of testimonials from engineers and other municipal officers.

GENERATING SETS.—Good, Better and Best Draft.—B. F. Sturtevant Co., Boston, Mass. Pamph.; 8 x 10¼ ins.; pp. 8; illustrated. 3½ × 6 ins.; pp. 8; illustrated.

This pamphlet includes a series of half-tone illustrations and tables of dimensions of the several types of direct-connected engine and generator outfits manufactured by the Sturtevant Co. These are intended for isolated plants, marine equipments or other places where space is at a premium. The second pamphlet calls attention to the advantages of mechanical draft over the old form of natural draft. Several instances of plants in operation are cited to prove that this is true.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng. News.
Mar. 9.	Hospital building work	Binghamton, N.Y.	Mar. 2
Mar. 9.	Museum buildings,	Philadelphia, Pa.	Mar. 2
Mar. 9.	Iron bridges (2),	Gonzales, Tex.	Mar. 2
Mar. 9.	Brick paving, Advertised, Engineering News, Mar. 2.	Champaign, Ill.	Mar. 2
Mar. 9.	Sewers, Advertised, Eng. News, Feb. 16 to Mar. 2.	Norfolk, Va.	Feb. 16
Mar. 9.	Bridges,	Columbus, Tex.	Mar. 9
Mar. 9.	Bridge abutments,	Townsend, Mass.	Mar. 9
Mar. 10.	Bridge substructure,	Toledo, O.	Mar. 9
Mar. 10.	Plans for water-works,	Stirling, Ont.	Mar. 9
Mar. 10.	Portland cement, Advertised, Eng. News, Feb. 16 to Mar. 9.	New York, N. Y.	Feb. 16
Mar. 10.	Cement, iron beams, etc., Advertised, Eng. News, Feb. 16 to Mar. 9.	Baltimore, Md.	Feb. 16
Mar. 10.	Ornamental iron work, Advertised, Eng. News, Feb. 16 and 23.	New York	Feb. 16
Mar. 10.	Railway,	Selma, N. C.	Feb. 23
Mar. 10.	Garbage disposal,	New York, N. Y.	Feb. 23
Mar. 10.	Steel bridge over railroad,	Newport, R.I.	Mar. 2
Mar. 10.	Macadamizing (16 mls),	Brownstown, Ind.	Mar. 2
Mar. 10.	Dredging and pier work,	New York	Mar. 2
Mar. 11.	Bridge,	Carrollton, Mo.	Mar. 2
Mar. 11.	Portland cement, Advertised, Engineering News, Feb. 23.	Washington, D.C.	Feb. 23
Mar. 11.	Water pipe, Advertised, Engineering News, Feb. 23.	Washington, D.C.	Feb. 23
Mar. 11.	Reservoir, Advertised, Engineering News, Feb. 9.	Washington, D. C.	Feb. 9
Mar. 11.	Road work, Advertised, Eng. News, Feb. 9 and 16.	Woodbury, N. J.	Feb. 9
Mar. 11.	Maps and plats,	Columbus, O.	Mar. 9
Mar. 11.	School building,	Washington, D. C.	Mar. 9
Mar. 11.	Extending air pump,	Montgomery, Ala.	Mar. 9

Mar. 13. Hospital building work, New York, N. Y. Mar. 2
Mar. 13. Sewers, Toledo, O. Mar. 2
Mar. 13. Railway (50 miles), Dublin, Ireland. Mar. 9
Mar. 13. Pipe sewers, Plainfield, N. J. Mar. 9
Mar. 13. Dredging, New York, N. Y. Mar. 9
Mar. 13. Paving, Rochester, N. Y. Mar. 9
Mar. 13. Removing garbage, Dover, N. J. Mar. 9
Mar. 14. Boiler house, etc., Lexington, Ky. Mar. 9
Mar. 14. Iron castings, Boston, Mass. Mar. 9
Mar. 14. Small water-works, Lexington, Ky. Mar. 9
Mar. 14. Pipe sewers, Waterbury, Conn. Mar. 9
Mar. 14. Crushed stone, Poughkeepsie, N. Y. Mar. 9
Mar. 14. Laying water pipe, Waterbury, Conn. Mar. 9
Mar. 14. Grading, Columbus, O. Mar. 9
Mar. 14. Asphalt paving, Sioux City, Ia. Mar. 9
Mar. 14. Bridge abutments, Denver, Colo. Mar. 9
Mar. 14. Bridge (steel truss), Macon, Ga. Feb. 23
Mar. 14. Plumbing, Fort Hamilton N. Y. Feb. 16
Advertised, Eng. News, Feb. 16 to Mar. 9.
Mar. 14. Sewers, Laurium, Mich. Mar. 2
Advertised, Eng. News, Mar. 2 and 9.
Mar. 15. Asylum building, Lancaster, Wis. Mar. 2
Mar. 15. Steel highway bridge, Le Roy, N. Y. Mar. 2
Mar. 15. Canal work, Oakland, Cal. Mar. 2
Mar. 15. Light-house, Baltimore, Md. Feb. 16
Advertised, Eng. News, Feb. 16 and 23.
Mar. 15. Metal work, Baltimore, Md. Feb. 16
Advertised, Eng. News, Feb. 16 and 23.
Mar. 15. Exhibition buildings, Glasgow, Scotland. Feb. 16
Mar. 15. Main sewer, Cleveland, O. Feb. 16
Advertised, Eng. News, Feb. 16 and 23.
Mar. 15. Water-works, Fayetteville, Tenn. Feb. 9
Advertised, Eng. News, Feb. 9 and 16.
Mar. 15. Bridges (3), Joliet, Ill. Jan. 19
Advertised, Engineering News, Jan. 19.
Mar. 15. Court house plans, Wilkesbarre, Pa. Jan. 26
Mar. 15. Riprap rock, Rock Island, Ill. Feb. 23
Advertised, Eng. News, Feb. 23 to Mar. 9.
Mar. 15. Fire boat repairs, New York, N. Y. Mar. 9
Mar. 15. Sewer castings, etc., Boston, Mass. Mar. 9
Mar. 15. Brick paving, Flint, Mich. Mar. 9
Mar. 16. School building, New York, N. Y. Mar. 9
Mar. 16. Engineers' supplies, New York Mar. 9
Mar. 16. Grading, Louisville, Ky. Mar. 9
Mar. 16. School building, Weehawken, N. J. Mar. 9
Mar. 17. Lumber, Chicago, Ill. Mar. 9
Mar. 17. Asphalt paving, Grand Rapids, Mich. Mar. 9
Mar. 17. Paving, Saginaw, Mich. Mar. 9
Mar. 18. Park work, New Orleans, La. Mar. 9
Mar. 18. Electric railway, Pernambuco, Brazil. Mar. 2
Mar. 19. Stave pipe, Fairhaven, Wash. Mar. 9
Mar. 20. Electric lighting, San Diego, Cal. Mar. 2
Mar. 20. Building, Iowa City, Ia. Feb. 23
Mar. 20. School building, Uptergrove, Ont. Mar. 9
Mar. 20. Supplies, Brantford, Ont. Mar. 9
Mar. 20. Sidewalks, Des Moines, Ia. Mar. 9
Mar. 21. Sewer system, Clinton, Mass. Mar. 9
Advertised, Eng. News, Mar. 9 and 16.
Mar. 21. School building work, New York, N. Y. Mar. 9
Mar. 21. Pumping engines (3), St. Louis, Mo. Feb. 23
Mar. 21. Bridge, Bellefontaine, O. Mar. 2
Mar. 21. Gas lighting, Binghamton, N. Y. Mar. 2
Advertised, Engineering News, Mar. 2.
Mar. 22. Court house, Dallas, Ore. Mar. 2
Mar. 23. Mooring stones, Portland, Me. Mar. 2
Mar. 23. Water-works extension, Bloomington, Ind. Mar. 2
Advertised, Engineering News, Mar. 2.
Mar. 23. Water-works, Windsor, N. Y. Mar. 9
Advertised, Engineering News, Mar. 9.
Mar. 23. Steel vault, Montgomery, Tex. Mar. 9
Mar. 23. Lumber, etc., New York, N. Y. Mar. 9
Mar. 23. Water mains, Brooklyn, N. Y. Mar. 9
Mar. 24. Sewer system, Cienfuegos, Cuba Mar. 9
Advertised, Engineering News, Mar. 9.
Mar. 24. Water-works, Cienfuegos, Cuba Mar. 9
Advertised, Engineering News, Mar. 9.
Mar. 24. Street grading, etc., St. Louis, Mo. Mar. 9
Mar. 24. Sewers, Pontiac, Mich. Mar. 2
Advertised, Engineering News, Mar. 2.
Mar. 25. Pumping engines and boilers, Bristol, Eng. Mar. 9
Mar. 25. School building, Cleveland, O. Mar. 9
Mar. 25. Plate-girder bridge, North Adams, Mass. Mar. 9
Advertised, Eng. News, Mar. 9 and 16.
Mar. 27. Electric plant, Santa Fe, N. Mex. Mar. 9
Mar. 27. Sewer and water pipe, Lockport, N. Y. Mar. 9
Mar. 27. Asphalt paving, Toledo, O. Mar. 2
Mar. 27. Court house, Leesville, La. Jan. 26
Mar. 28. Docks, Chicago, Ill. Mar. 2
Advertised, Eng. News, Mar. 2 to 23.
Mar. 28. Water-works, Darlington, Okla. Mar. 9
Mar. 28. Pipe sewers, Kearney, N. J. Mar. 9
Mar. 29. Water-works pump, South Bend, Ind. Mar. 9
Mar. 30. Public building work, San Francisco, Cal. Mar. 2
Advertised, Eng. News, Mar. 2 and 9.
Mar. 30. Jail building, Uvalde, Tex. Mar. 9
Mar. 30. Public building, San Francisco, Cal. Mar. 2
Advertised Engineering News, Mar. 9.
Mar. 31. Electric plant, Springfield, N. S. Mar. 9
Mar. 31. Garbage disposal, Rochester, N. Y. Mar. 2
Mar. 31. Telephone concessions, Shanghai, China. Nov. 24
Advertised, Eng. News, Nov. 17 to Dec. 8.
No date. Pontoon bridge, Quincy, Ill. Mar. 2
No date. Wagon road, Kalispell, Mont. Mar. 9
" . Water piping, Baltimore, Md. Mar. 9
" . Water-wks and light plant, Cullman, Ala. Mar. 9
" . Excavating, Harvey, Ill. Mar. 9
Advertised, Eng. News, Mar. 9 to 23.

RAILWAYS.

ARKANSAS, GUTHRIE & CALIFORNIA.—The Toledo Construction Co., Toledo, O., informs us that it has the contract for constructing this proposed line from Guthrie to Shawnee, Okla., about 50 miles. Financial matters have not yet been arranged, but the company expects to be ready to sub-let the work about April 1. Henry Hudson, Pres., Guthrie, Okla.

ATLANTIC & GULF COAST.—W. B. Smith, G. L. Summers, J. P. Thurman, of Barnesville, Ga.; R. H. England, of New York, and others are interested in the construction of this proposed line from Barnesville to Yatesville, Ga., 10 miles.

BIRMINGHAM SOUTHERN.—Official reports state that nothing definite has been done towards building this proposed system, other than making surveys. The lines projected are from Birmingham to Blocton, Ala., 40 miles; Birmingham to Wylam, Ala., 12 miles; Pratt City to Blossburg, Ala., 11 miles, all of which will be operated in connection with a number of lines now under the control of the Tennessee Coal, Iron & R. R. Co. N. Baxter, Jr., Pres., Birmingham, Ala.

BOSTON & MAINE.—The house of the New Hampshire legislature has passed a bill authorizing this company to build a railway from Manchester to Milford, N. H., about 16 miles. H. Bissell, Ch. Engr., Boston, Mass.

BUFFALO, ST. MARYS & SOUTHWESTERN.—This line, in operation between Shawmut and Clermont, Pa., together with the property of the Shawmut Coal Mining Co., is said to have been sold for $4,000,000 to a company of which John Byrne is president and Henry Marquand vice-president, both of New York.

BURLINGTON & MISSOURI RIVER.—I. S. P. Weeks, Ch. Engr., Lincoln, Neb., informs us that about $250,000 will be spent this year in iron bridges, culverts and pipe to replace the pile bridges along this line. Over $250,000 will also be spent in improving the Atchison & Nebraska line between Lincoln and Rulo, Neb., 148 miles. This latter work has already been commenced and will take about four years to complete it so as not to interrupt operation. An important feature of this reconstruction will be the raising the grade above high water mark where the right of way adjoins the river. About thirty miles of this track will be raised, some of it as high as five or six feet above the present grade. To further protect the line from the Nomaha River, about ten miles of it will be entirely changed, and in some places the new line will be moved back half a mile from the present route.

CENTRALIA & EASTERN.—This company is being organized with a capital stock of $25,000, to build a standard gage railway from Centralia, Wash., to Salzar Valley, a distance of several miles, thus opening up new timber lands and making Centralia a mill center. Geo. E. Birge, C. S. Gilchrist, A. C. Shaw and others are interested.

CHICAGO & ALTON.—Reports state that Geo. J. Gould, New York; E. Harriman and others have purchased this line, and will spend about $3,000,000 in improvements and in elevating its tracks in Chicago. H. C. Draper, Ch. Engr., Monadnock Block, Chicago, Ill.

CHICAGO & NORTHWESTERN.—Winston Bros., Globe Bldg., Minneapolis, Minn., are reported to have received the contract for grading the proposed double track of this railway between Council Bluffs and Tama, Ia. Work between Council Bluffs and Missouri Valley, about 23 miles, is expected to be completed by Aug. 1; the remainder of the distance involves much heavier work. It is said that much of the work will be sub-let. J. E. Blunt, Ch. Engr., Chicago, Ill.

COLORADO VALLEY.—Reports state that this company has been reorganizeu with J. R. Daugherty and Charles Wiggins, St. Louis, Mo.; Thomas Trammell, of Sweetwater, Tex., and others as directors, and that propositions are being considered for the building of the line by a St. Louis construction company.

COLUMBUS, MARSHALL & NORTHEASTERN.—This company was incorporated in Michigan, Feb. 28, with a capital stock of $1,200,000, to construct and operate a steam railway from Marshall to Bay City, 140 miles; work to begin in the spring. The directors are: C. E. Sawyer, Marshall; W. E. Sawyer, Deadwood, S. Dak.

CUMBERLAND VALLEY.—T. J. Brereton, Ch. Engr., Chambersburg, Pa., informs us that this company does not expect to extend south from Winchester, Va., as currently reported.

DARDANELLE & OLA.—This company has been incorporated in Arkansas, with $100,000 capital stock, to build from Dardanelle to Ola, Ark., on the proposed Choctaw & Memphis R. R., 18 miles. John H. Hope, Pres.; M. Kaufman, Treas.

DULUTH, SOUTH SHORE & ATLANTIC.—It is announced that this company is now making surveys for a new line from Newtonville, near Keweenaw Bay, along the Sturgeon River foot-hills to copper mines. W. F. Fitch, Gen. Mgr., Marquette, Mich.

EASTERN ILLINOIS & MISSOURI.—We are informed that this company, which is to build an extension of the Chicago & Eastern Illinois from Marion to East Cape Girardeau, Ill., has brought suit to have two tracks of land near Thebes, Ill., condemned. This will enable the new line to ballast its roadbed with crushed limestone from the same bluffs used by the Illinois Central to secure most of its ballast. The new surveys cross the Illinois Central at Ullin, Ill. W. S. Dawley, Ch. Engr., 355 Dearborn St., Chicago.

HOCKING VALLEY.—This company has been incorporated in Ohio, with a capital stock of $26,000,000, to operate the old Columbus, Hocking Valley & Toledo Ry. The incorporators are: Nicholas Monsarrat, Columbus, O.; Geo. H. Gardiner, New York, and others.

ILLINOIS CENTRAL.—This company, it is said, will spend $150,000 this summer in raising its tracks on both sides of the incline above the city of Evansville, Ind. Several bridges will have to be erected. D. Sloan, Ch. Engr., Chicago.

INTERNATIONAL DOCK TERMINAL.—This company was incorporated in New Jersey, March 2, with $1,500,000 capital stock to construct and operate a railway from a point adjoining the line of the West Side Connecting R. R. in Jersey City, N. J.; and extending southeasterly three miles to a point on Oyster Island, in New York Bay. The incorporators are: Daniel F. Appleton, John H. Chilver, Roselle, N. J.; Harry Hayes, Hackensack, N. J.

KANSAS CITY, HOT SPRINGS & NEW ORLEANS.—Incorporated in Arkansas March 1 with a capital stock of $1,350,000, to build from Hot Springs to Mansfield, Ark. J. C. Donohue, P. J. Ledwidge and others, Hot Springs.

KANSAS, MISSOURI & NORTHERN.—Incorporated in Missouri, March 2, with $600,000 capital stock, to build from St. Joseph, Mo., to Omaha, Neb., about 150 miles. Robert S. Doubleday, Pres., New York; R. A. Reese, Vice-Pres., St. Louis, Mo.

MINNEAPOLIS & ST. LOUIS.—H. B. Kelley, Ch, Engr., 1124 Guaranty Loan Bldg., Minneapolis, Minn., informs us that several parties are now engaged in locating the proposed extension from New Ulm, Minn., southerly 150 miles into Iowa. The necessary capital has been secured, and it is expected to let contracts early in the spring. E. Hawley, Pres., New York.

MONTANA.—Reports from White Sulphur Springs, Mont., state that Nesbitt & Dean have been awarded the contract for grading the proposed extension of the line from the summit of Musselshell divide to Martinsdale.

PACIFIC & IDAHO NORTHERN.—This company has been incorporated in Idaho, with $8,000,000 capital stock, to build a line from Weiser, through Washington county, to Lewiston, Idaho, with a branch from the Weiser canyon to Payette, one from Salubria to Ruthburg, one from Council to the Seven Devils, and one from Salmon Meadows to the Payette lakes. The principal place of business will be at Weiser; the directors are. Thomas W. Bates, Mart Patrie, George S. Glover, Lucius G. Wilkinson and O. E. Jackson.

PITTSBURG, LAKE ERIE & CHICAGO.—N. Huckins, Oberlin, O., informs us that the preliminary survey has been made for this proposed line as far as Akron from Sandusky, via Oberlin and Medina, O., 143 miles; capital for construction has also been secured. John McKelvey, Pres., Sanders, Ky.; Christopher Judson, Ch. Engr., Sandusky, O.

PORT ANGELES EASTERN.—Isaac C. Atkinson, Vice-Pres. and Gen. Mgr., Port Angeles, Wash., informs us that the right of way has been obtained and the capital secured for building this proposed line from Port Angeles to Junction City, via Dungeness, Seguin and Discovery Bay, 35 miles. Surveys will be completed about March 15, and contracts will be let as soon as surveys are finished and specifications prepared. Chas. A. Cushing, Pres.; E. A. Fitz Henry, Ch. Engr., both of Port Angeles, Wash.

ST. LOUIS, IOWA & NORTHERN.—C. J. Du Bois, Ch. Engr., Macon, Mo., informs us that contracts will be let for building this line about May 15 or June 1. The route is from Memphis to Herman, via Edina, Bethel, Paris and Mexico, Mo., 285 miles. About 60 miles have been located, and it is hoped to complete the first division of the line before next year. S. H. Sawyers, Pres., Eldon, Ia.

SMETHPORT.—Incorporated in Pennsylvania March 6, with a capital stock of $90,000, to build 9 miles of steam railway in McKean county, Pa. Elisha K. Kane, Pres., Kushequa, Pa.

SHAWNEE, OKLAHOMA & MISSOURI COAL & RY.—Incorporated in Oklahoma March 2, with $1,000,000 capital stock, to build from Purcell, Ind. Ter., to Seneca, Mo., 150 miles. C. J. Benson, H. B. Dexter and George McLogan are incorporators.

SPRINGFIELD, HARRISON & SOUTHERN.—Incorporated in Missouri, with a capital stock of $2,000,000, to construct a line from Springfield, through Christian, Stone and Taney counties, Mo., into Boone county, Ark., 165 miles in Missouri and 100 miles in Arkansas. The incorporators are: D. B. Lott, A. Woods, St. Louis, Mo.; A. T. Clark, Belleville, Ill.

UNION CONSTRUCTION CO.—This company has been incorporated in Wisconsin with $10,000 capital stock, to build a railway 350 miles in length from Walworth county north to Douglas county, Wis. C. J. Adams, Pres., Minneapolis, Minn.; C. T. McElroy, Secy., Milwaukee, Wis.

WHITE PASS & YUKON.—Reports state that this line has been completed from Skaguay, 20 miles, to the summit of White Pass, Alaska, an elevation of nearly 3,000 ft. The route from White Pass to Lake Bennett is quite easy, and it is said that track-laying will be continued. The company does the grading under the supervision of the Pacific Contract Co., Ltd., and the employment agent is J. Heney, Seattle, Wash. The completed line as projected will be 312 miles in length. S. H. Graves, Pres., 1016 Chamber of Commerce Bldg., Chicago, Ill.

WINONA, MARSHALLTOWN & SOUTHWESTERN.—This company has been reorganized at Marshalltown, Ia., with the following officers: N. S. Ketchum, Pres.; G. F. Kirby, Secy.; C. C. Gilman, Ch. Engr. Surveys have been made from Osage to Charlton, Ia., tapping rich coal fields and agricultural districts, and it is said that grading will be commenced in the spring.

STREET AND ELECTRIC RAILWAYS.

BIDDEFORD, ME.—The Saco River Electric R. R. Co. was granted a franchise March 4 to build in this city. Edward Walker, Girard Bldg., Philadelphia, is interested.

PORTLAND, ME.—It is reported that the Portland R. R. Co. has assumed control of the Portland & Cape Elizabeth Ry., an electric line 16 miles in length. W. R. Wood, Pres.

CENTER BARNSTEAD, N. H.—The legislature is stated to have granted a charter for the construction of an electric railway from Center Barnstead to Gilmanton Iron Works.

BRIDGEWATER, MASS.—Jas. F. Shaw, Jr., is stated to have been awarded the contract for building the proposed electric railway between here and Middleboro.

EDGARTOWN, MASS.—The Edgartown St. Ry. Co. is being organized, with a capital stock of $30,000, to construct an electric line between this city and Cottage City. Among those interested are: Wm. M. Butler, Boston; Edmund G. Eldridge, Cottage City, and J. E. White.

PEMBROKE, MASS.—The selectmen of this town have granted a franchise to the Brockton & Plymouth St. Ry Co. Horace B. Rogers, Mgr., Brockton, Mass.

BRISTOL, R. I.—Bibber, White & Co., Boston, Mass., are reported to have been awarded the contract for building a street railway from Bristol to Mount Hope Ferry Co.'s wharf on Mount Hope Bay, for the Bristol Land & Investment Co., at $39,800. Work will be commenced as soon as legislative permission is granted.

ALBANY, N. Y.—It is announced that work on the Albany, Helderberg & Schoharie Electric Ry. will begin at New Scotland in April. A meeting of the stockholders is expected to be held this month, at which the capital stock will be increased from $300,000 to $450,000. The Albany Construction Co., 93 State St., Albany, holds the general contract, and the route is 45 miles in length.

BUFFALO, N. Y.—U. L. Upson, Gen. Mgr., 1005 Ellicott Square, informs us that the Continental Construction Co., Boston, Mass., will begin the construction of the proposed Buffalo, Hamburg & Aurora Ry., 21 miles in length, at once, so as to complete it by Aug. 1.

FALLSBURG, N. Y.—B. Van Steenbergh, Pres. of Fallsburgh & Monticello R. R. Co., 53 Broadway, New York, informs us that this company is ready to receive propositions for the completion of 2¼ miles of road now graded and for which the rails and some of the ties have been secured. Bonds amounting to $30,000 have been sold, and $45,000 more are for sale. The proposed line will be 5½ miles long.

NEW HARTFORD, N. Y.—The application of the Utica & Suburban Ry. Co. for permission to extend its tracks from Genesee St., Utica, to Capron and to the terminus of the Belt Line tracks in Upper New York Mills has been granted by George Lambert, Comr. of Highways for the Town of New Hartford.

SCARSDALE, N. Y.—The highway commissioners of Scarsdale will give another hearing to the Tarrytown, White Plains & Mamaroneck R. R. and the New York, Westchester & Connecticut Traction Co., March 10. Both companies are applicants for a franchise which will enable them to run from White Plains to Mount Vernon, over the White Plains Road.

SCOTCH PLAINS, N. J.—L. W. Serrell, Plainfield, N. J., has been awarded the contract for constructing an extension of the Plainfield St. Ry. to Scotch Plains.

LANSDOWNE, PA.—The Arcadia Park Ry. Co. was incorporated with $25,000 capital stock, March 1, to build in this borough. Henry S. Brennen, Pres., and H. G. Thompson, Philadelphia, are incorporators.

CONNELLSVILLE, PA.—The Mount Pleasant, Scottdale & Connellsville Electric Ry. Co. was incorporated, Feb. 23, with $400,000 capital stock, to build between Connellsville and Mount Pleasant, Westmoreland county. The incorporators are: Wm. E. Tustin, Pres., Allegheny, Pa.; Harry C. Fehland, F. W. Hicks, Pittsburg, Pa.; Arthur P. Byrne, Scottdale, Pa.; Gilbert S. Lewis.

SEIPS, PA.—The Northampton Central St. Ry. Co. was incorporated March 6, with $72,000 capital stock, to build from Seipsville to Nazareth, Northampton county. Chas. A. Richardson, Pres., Worcester, Mass.; E. J. Fox, Easton, Pa., and others are incorporators.

HAMPTON, VA.—Plans are being prepared by Henry Brauns, Arch., Builders' Exchange, Baltimore, Md., according to reports, for a new power house at Hampton for the Newport News & Old Point Comfort Electric Co. Sufficient power will be generated to operate 12 miles of railway and to supply light and power to Newport News and nearby towns. Wm. J. Payne, Pres., Richmond, Va.

ELYRIA, O.—Parks Foster, Pres., Elyria, informs us that the right of way is being obtained for the Lorain County R. R., from Lorain to North Amherst. No contracts are being let as the work will be done by a construction company.

WARSAW, IND.—We are informed that W. Y. Chamberlain, Engr., has just completed surveys for an electric street railway from Warsaw to Winona assembly grounds, three miles. The line must be in operation by June 1. N. J. Clodfelter, Gen. Mgr., Indianapolis, Ind.

PORT HURON, MICH.—The council has granted the City Electric Ry. Co. a new 30-year franchise, the company agreeing to extend its line south along the river a distance of about three miles to the site of the proposed steel shipbuilding plant.

CHICAGO, ILL.—The council has granted a franchise to the Northern Electric Ry. Co. for the extension of its present line about 2½ miles.

HARVARD, ILL.—W. H. Ward, Harvard, has received the contract for erecting the power house, 100 x 50 ft., for the proposed Chicago, Harvard & Geneva Lake R. R., at Walworth. The Continental Construction Co., of Boston, general contractors.

LA SALLE, ILL.—The La Salle County Interurban Electric Ry. Co., which is to connect Streator, Ottawa, La Salle, Peru and Spring Valley, has applied for a franchise through this town. Chas. H. Rathburn.

SIOUX CITY, IA.—The Sioux City Transit Co. was incorporated, Feb. 27, with $200,000 capital stock, to operate the elevated railway in this city. The incorporators are: A. W. Giehm, A. S. Wilson and others.

STILLWATER, MINN.—The council has granted a franchise to M. J. Mandelbaum, Cleveland, O., to build a local line. Several interurban lines are projected.

CHERRYVALE, KAN.—C. J. Corbin, of this city, has been granted an electric railway franchise.

BUTTE, MONT.—Henry Elling, Butte, is said to be contemplating the construction of an electric railroad from the terminal of the Gaylord & Ruby Valley Ry. at Twin Bridges up the Ruby Valley to a point near Laurin, and possibly to Virginia City.

KANSAS CITY, MO.—The council passed ordinances, Feb. 17, giving the Brooklyn Ave. St. Ry. Co. a franchise to build on Grand Ave., from 3d to 13th St., and to the Metropolitan Ry. Co. to build a viaduct on 8th St., from Walnut to Wall St.

GLASGOW, SCOTLAND.—Bids are asked until March 15 for the reconstruction of the corporation tramways. John Young, Gen. Mgr.

MOSCOW, RUSSIA.—Press reports state that bids are asked by the council of this city for the construction of an electric railway, and that final bids will be received from foreign firms up to Oct. 1.

PEKIN, CHINA.—The Siemens & Halske Co., 100 Broadway, New York, is reported to have closed a contract to build an electric railway between Pekin and Metschiapu. Work is expected to begin this summer.

ELECTRIC LIGHT AND POWER.

AUGUSTA, ME.—The Union Gas & Electric Co. has let the contract for three 670-HP. generators for its plant on the Messolouskee River to the Stanley Electric Mfg. Co., Pittsfield, Mass. Frank Chase, Mgr.

BENTON FALLS, ME.—It is stated that the Somerset Fibre Co. proposes to build a power plant at this place. Power will also be transmitted to Albion and Winslow.

FORT PREBEL, ME.—We are informed that the New Jersey Foundry & Machine Co., Havemeyer Bldg., New York, submitted the lowest bid, at $5,296 and $5,446, March 6 for an electric plant at the fort, as advertised in Engineering News. John P. Cushing & Co., 64 Federal St., Boston, submitted the next lowest bid at $5,300. The table of bids will be given next week.

CHICOPEE, MASS.—The City Electric Light Co. proposes to install two new 120-light machines and also a number of inclosed arc lamps, at a cost of $5,000.

ALBANY, N. Y.—Senator Higgins has introduced a bill providing for the establishment of a plant for the state buildings in this city, to cost $60,000. The work will be in charge of the superintendent of public buildings.

FORT PLAIN, N. Y.—We are informed that Guy Beardsley, East Canada Creek, N. Y., proposes to furnish power to the plant of the Fort Plain Gas & Electric Light, Heat & Power Co. from the power on East Canada Creek.

KINGSTON, N. Y.—The High Falls Electric Co. is being organized to build a plant to transmit the power of the Honk Falls power to this city, a distance of some miles. C. P. Dickinson, Fitchburg, Mass., and Thos. Gray, Mgr., Ellenville, N. Y., may be addressed.

JAMESTOWN, N. Y.—E. A. Fitzgerald, P. O. Box 298, Syracuse, N. Y., has submitted a report on the value of the plant of the Jamestown Electric Light & Power Co., which the city proposes to purchase. The plant is valued at $116,000.

NEW HARTFORD, N. Y.—The village board, it is stated, is asking for bids for electric lighting.

NEW YORK, N. Y.—Bids are asked by the board of education, 148 E. 20th St., until April 4, for an electric plant, etc., for the new city prison.

WAPPINGERS FALLS, N. Y.—An election will be held March 21 to vote on the question of issuing $15,000 in bonds for a plant.

ATLANTIC CITY, N. J.—The court has sustained the contract recently let to John H. Rothermel, 531 Court St., Reading, Pa., for erecting a plant and for furnishing light. Work will probably soon be begun.

FREEPORT, PA.—The plant of the Freeport Electric Light Co. is reported to have been burned March 2, causing a loss of $2,000.

DOVER, DEL.—The governor has signed the bill authorizing this city to issue $22,000 in bonds for a plant.

WILMINGTON, DEL.—The Legislature has been asked to grant this city permission to issue bonds for a plant.

BALTIMORE, MD.—We are informed that the following submitted bids March 1 for machinery and materials for a plant for the Mount Royal pumping station, as advertised in Engineering News: Morton, Reed & Co., 5 E. German St., Baltimore; McKay-Howard Engineering Co., 106 E. German St., Baltimore; Kingsbury, Samuels & Co., General Electric Co., Schenectady, N. Y.; Westinghouse Electric & Mfg. Co., Pittsburg; F. Roberts & Co.; Ellicott Machine Co., Southern Electric Co., North and Lexington Sts., Baltimore; F. D. Potter Co.; Siemens & Halske Electric Co., Perin Bldg., Cincinnati; J. F. Buchanan & Co., The Bourse, Philadelphia. Wm. L. Kenly, Ch. Engr.

WILLIAMSPORT, MD.—We are informed that this place voted March 6 to put in an electric plant. Bids are wanted at once.

FREDERICKSBURG, VA.—A. P. Rowe, Mayor, writes us that though this city voted Feb. 28 to build a plant to cost $10,000, some informality in regard to the vote will delay the erection of the plant until the Legislature meets in December.

SOUTH BOSTON, VA.—It is proposed to build a plant and a cotton mill at Hico Falls on the Dan River, according to reports. R. S. Barbour, Pres.

FAYETTEVILLE, N. C.—The legislature has authorized this place to issue $15,000 in bonds for a plant.

LINCOLNTON, N. C.—The legislature has been asked to grant this place permission to issue bonds for a plant and water-works.

SALISBURY, N. C.—This place has been authorized to issue bonds for a plant and water-works.

TARBORO, N. C.—This place has been granted permission to issue $10,000 for a plant. J. A. Weddell, Clk.

BIRMINGHAM, ALA.—The Consolidated Electric Light & Power Co. is reported as arranging to extend its plant to the suburbs.

CULLMAN, ALA.—This place has asked for bids for constructing a plant and water-works, to cost $35,000. R. M. Newbold & Co., Engrs., Birmingham, Ala.

HOUMA, LA.—The General Electric Co., Schenectady, N. Y., is reported to have been awarded the contract for the machinery for building the plant for the Houma Lighting & Ice Mfg. Co. H. L. Wilson, Secy. and Treas.

OXFORD, MISS.—The trustees of Oxford University have decided to let a contract for a plant for the buildings, according to reports. Col. J. W. Faulkner and R. H. Thompson may be addressed.

SPRINGFIELD, TENN.—H. E. Butcher, owner of the proposed plant, writes us that contracts have been let for half the plant. It will be doubled as soon as convenient. The plant will have a capacity to furnish 20 arc and 1,500 incandescent lights; estimated cost, $7,000.

LEXINGTON, KY.—Bids are asked until March 14 for furnishing and installing a plant, water-works, etc., for the manual training buildings of the Kentucky Houses of Reform. W. P. Walton, Secy. Bd.; Richards & McCarty, Archs., Columbus, O.

CAMBRIDGE, O.—William C. Benbow, Engr. and Supt., Cambridge Electric & Energy Co., informs us that a contract was awarded March 6 for street lighting for five years. A plant will be installed for incandescent lights and power. Will use simple engines and R. T. boilers. Incandescent dynamos are the only machinery purchased thus far. N. H. Barber, Gen. Mgr.

COSHOCTON, O.—Work will soon be begun on the proposed plant to cost $15,000. J. M. Ickes, Newark, O.

DEFIANCE, O.—The Mayor writes us that the question of issuing bonds for a plant will be voted upon April 3.

MARIETTA, O.—The committee is considering sites for the proposed plant.

TOLEDO, O.—Mayor Jones has introduced a resolution authorizing the submission to the people April 3 of the question of building a municipal plant.

INDIANAPOLIS, IND.—Bids are asked by the Wm. H. Block Co., 7 E. Washington St., for a plant for its department store. It is at present using 22 arc incandescent lights throughout; one 1-HP. motor, running cash system; 2 passenger elevators, 15-HP. each; 1 freight elevator, 15-HP.

BELDING, MICH.—M. A. Reed, Secy. and Treas. Citizens' Electric Co., writes us that bids will be wanted this month for the machinery, etc., for the proposed water power plant to cost about $20,000. There will be wanted a 56-in. water wheel, under 15 ft. head; 180 K-W. alternator, etc. The wheel-pit only has been prepared. The plant will have a capacity for 20 2,000-c. p. arc and 1,200 16-c. p. incandescent lights.

QUINCY, MICH.—C. F. Crouch, Ch. Engr., writes us that the city has engaged the Frank B. Rae Engineering Co., Fort Dearborn Bldg., Chicago, to take charge of the construction of the proposed plant, to cost $6,000, as noted in our issue of Feb. 23.

ASHTON, ILL.—It is proposed to build a plant, according to reports.

APPLETON, WIS.—A company is being organized to build a power plant at White Rapids on the Menominee River. O'Keefe & Orbison, Engrs., Appleton; Wallace Cook, Evanston, Ill., and Benj. C. Hooper, Oshkosh, Wis.

COLUMBUS, WIS.—An election will probably be held April 4 to vote on the question of building a plant.

STILLWATER, MINN.—Press reports state that the Stilwell-Bierce & Smith-Vaile Co., Dayton, O., has secured an option on the Apple River falls water power and contemplates the formation of a company for the transmission of electricity to this city and to St. Paul. In case the option lapses Christian Burkhardt, the owner of the falls, will make other arrangements to furnish power and light and with that object in view has conferred with the Stillwater council.

JOPLIN, MO.—This city voted Feb. 28 to issue $30,000 in bonds for a plant. Bids for the purchase of the bonds will soon be asked.

LEES SUMMIT, MO.—A. C. Miller, Cy. Clk., writes us that the question of issuing bonds for a plant will be voted upon in April.

MARIANNA, ARK.—Owen Ford, 710 Security Bldg., St. Louis, Mo., is reported as preparing plans for a plant in connection with the proposed water-works.

MUSCOGEE, IND. TER.—The plant and other property owned by C. W. Turner were destroyed by fire Feb. 23, causing a reported loss of $200,000.

HOUSTON, TEX.—The council has voted to retain Alexander Potter, 137 Broadway, New York, to prepare plans for a plant, improvements to the sewerage, a garbage disposal plant, etc. S. H. Brashear, Mayor; J. A. Miller, Cy. Engr.; H. H. Dickson, Chn. Com.

STILLWATER, OKLA.—Abercrombie & Miller have asked for a franchise for a plant.

SEATTLE, WASH.—The Washington Power Transmission Co., incorporated recently in New Jersey and having offices in the Corporation Trust Co.'s Bldg., Jersey City, has asked for bids for delivering 3,000 poles along the line from Cedar River Falls to Kent and between Tacoma and Seattle. The contracts for the machinery are said to have been let. The company has a capital stock of $1,250,000, and is formed for the purpose of developing 25,000 hydraulic HP. and 12,000 electric HP. at Cedar River Falls, Wash., for use in Tacoma, Seattle and other cities of Puget Sound. F. L. Dame, Gen. Supt.; T. A. Noble, Engr., Bailey Bldg., Seattle.

ANTIOCH, CAL.—J. H. Derringer and Wm. Johnson have been granted a 20-year franchise in Crockett and Valona, according to reports.

BENICA, CAL.—Bids are asked until April 4 for the purchase of a franchise for a transmission line. H. K. White, Cy. Clk.

SUISUN, CAL.—Arrangements are being made for constructing the power plant on Cache Creek, Lake county, for the Clear Lake Power Co. The plant will furnish about 40,000 HP. E. H. Winship is interested.

CARSON, NEV.—Col. Boyle, it is stated, proposes to organize a company to build a plant on Lake Tahoe and to transmit the power to this city, Reno and Virginia. A tunnel four miles long is proposed.

SANTA FE, N. MEX.—Bids are asked until March 27 for furnishing the materials and for installing a plant at the Indian School here. A. H. Viets, Supt., Santa Fe; W. A. Jones, Indian Comr., Dept. of Interior, Washington.

SPRINGVILLE, UTAH.—The council proposes to build a city plant. It is stated that it refused to grant a franchise to Davis Clarke, S. J. Norris and W. L. Harris.

BOISE, IDAHO.—It is stated that about $500,000 has been secured to carry on the construction of the power plant, etc., at American Falls for the Bonanza Power & Land Co. J. J. Cusick, Gen. Mgr.

BURKE, IDAHO.—W. R. Miller, Mgr. Canyon Creek Electric Light Co., Ltd., writes us that the water power plant is in operation, and that the machinery for the steam plant is on the ground. There will be wanted, in September, a 62 K-W. alternator and also about two miles of 2-0 wire. The plant cost $15,000.

SKAGWAY, ALASKA—Mr. Keelar, it is stated, has asked for a franchise for a new plant.

SPRINGHILL, N. S.—Bids are asked by the Edison Electric Light & Power Co., Ltd., until March 31 for the development of a water power, supply of generators, switchboard equipment, transmission line, extension of line in new district, wiring and all necessary material for 3,000 house lights. Generators to consist of two alternators 75 K-W. each. Hydraulic machinery necessary to develop 500 HP., masonry construction and power house. J. E. Simpson, Pres.

LIVERPOOL, N. S.—It is stated that the council will soon ask for bids for a plant.

OTTAWA, ONT.—It is expected to let contracts soon for the machinery and for the construction of the power plant for the Metropolitan Electric Co., Ltd., Carleton Chambers, Ottawa. A canal will be built at Britannia, on the Ottawa River, where it is proposed to develop about 70,000 HP. Capital stock, $500,000, of which $300,000 has been subscribed. John Aylen, Engr.; Thos. Lindsay, Pres.

GODERICH, ONT.—The legislature is reported to have granted this place authority to extend the plant at a cost of $5,000. Wm. Mitchell, Clk.

PUEBLA, PUEBLA, MEX.—Press reports state that the Western Electric Co., 227 South Clinton St., Chicago, Ill., will install a plant on the Atoyac River, 12 miles from here. It proposes to utilize water power from the canal constructed by Mr. Sebastian de Mier at a cost of over $500,000 and will install electric machinery and water wheels to transmit current to Puebla and other adjoining towns for use in factories. It will also furnish power for the Puebla Light & Power Co.'s plant. The first installation of machinery will be 2,000 H. P.

BRIDGES.

WATERVILLE, ME.—Bushey & Son, Waterville, have been awarded a contract for the excavation and stone work of three stone piers and two abutments of the bridge over the Kennebec River, for the Waterville & Wiscasset R. R. Co. Chas. H. Cooke, Ch. Engr.

RUTLAND, VT.—The Rutland-Canadian R. R. Co. awarded a contract March 4 to the Edge Moor Bridge Co., Wilmington, Del., for 12 steel bridges, to cost about $100,000. The itemized bids will be given in our next issue.

BOSTON, MASS.—The following bids were received by the city engineer March 3 for two retractile draws for the bridge on Sumner St. extension: A. & P. Roberts Co., Philadelphia, $23,900; Berlin Iron Bridge Co., East Berlin, Conn., $23,820; Penn Bridge Co., Beaver Falls, Pa., $25,864; Edge Moor Bridge Works, Wilmington, Del., $24,592; N. J. Steel & Iron Co., Trenton, $24,000; Pittsburg (Pa.) Bridge Co., $24,515; Massillon (O.) Bridge Co., $26,546; Boston Bridge Works, Boston, $27,600; Youngstown (O.) Bridge Co., $28,000; N. E. Structural Co., Boston, $26,640; Canton (O.) Bridge Co., $26,000; New Columbus (O.) Bridge Co., $28,960; King Bridge Co., $24,982.

MALDEN, MASS.—An order for an appropriation of $4,200 to construct a bridge at Spot Pond has been referred to the board of aldermen.

NORTH ADAMS, MASS.—Bids are asked until March 21 for building the steel superstructure of a plate girder highway bridge over the Hoosac River, at State St., as stated in our advertising columns. J. L. Temple, Comr.

TOWNSEND, MASS.—Bids are asked by the Massachusetts highway commission, Boston, until 12 m., March 9, for reconstructing portions of the abutments of a bridge over Squannacook River.

WATERTOWN, MASS.—At the next annual town meeting this place will vote on the question of appropriating $7,500 for rebuilding its half of the bridge over the Charles River at Bemis.

NEW HAVEN, CONN.—Col. Henry M. Roberts, U. S. Engr., will recommend to the secretary of war that a lift drawbridge be constructed over West River at Kimberly Ave.

BINGHAMTON, N. Y.—At the election March 2 it was voted to issue $40,000 of bonds for the Tompkins St. bridge.

CARLTON, N. Y.—At the coming town meeting this place will vote on the question of appropriating $14,000 for a new bridge.

HARVARD, N. Y.—Geo. Leicht informs us that it has been voted to appropriate $6,000 for constructing an iron bridge of two spans 16 ft. wide on stone foundation. Address Geo. Jones, Eastbranch, N. Y.

OWEGO, N. Y.—A contract has been awarded to the Owego Bridge Co. for a bridge over Fall Creek.

ROCHESTER, N. Y.—The council has instructed the city engineer to prepare a plan of a cross section of the Genesee River for the proposed bridge between Greece and Irondequoit; estimated cost, $125,000. As soon as matters become more definite the committee will prepare its report which will be presented at the next annual session, or at a special session if advisable. Supervisor Yates, Chn. Com.

ST. JOHNSVILLE, N. Y.—Frank B. Towman, Engr., informs us that this village in connection with the N. Y. C. & H. R. R. Co. and the state railroad commissioners is about to construct an overhead crossing on Bridge St. The structure consists of an iron bridge crossing nine tracks, about 100 ft. of steel trestle, masonry walls and several thousand yards of embankment; estimated cost, $25,000. Work is to commence April 1.

BELMAR, N. J.—The Atlantic Coast Electric Ry. Co. has awarded a contract to the Youngstown Bridge Co., Youngstown, O., for constructing an iron bridge over Shark River.

NEWARK, N. J.—The park commissioners will soon ask bids for constructing a steel bridge over the canal at Sixth Ave.

BRADDOCK, PA.—The North Braddock council has approved plans submitted by the Wilkinsburg & East Pittsburg St. Ry. Co. for three new steel bridges to cost $50,000.

McKEE'S ROCKS, PA.—Reports state that the Pressed Steel Car Co. proposes to construct a bridge over the Ohio River between Woods' Run and McKee's Rocks, to cost about $350,000. The plans, which are being prepared by the Schultz Bridge & Iron Co., Pittsburg, will be submitted to the war department for approval.

WILKESBARRE, PA.—Plans are being prepared for two stone arch bridges, 80 and 160 ft. long, respectively, over the Kingston and Dorranceton Ponds. Wright, Rutter & Smith, Engrs.

POCOMOKE CITY, MD.—It is reported that the New York, Philadelphia & Norfolk R. R. Co. is preparing to construct a new steel bridge over the Pocomoke River, to cost about $75,000, to be completed by May 1. A. J. Cassatt, Pres., 26 South 15th St., Philadelphia.

COLUMBUS, O.—Bids are asked until April 1 for furnishing material and constructing a 210-ft. riveted truss span, substructure, etc., and for three smaller bridges. W. H. Halliday, County Audr. and Clk.

SPRINGFIELD, O.—The Columbus Bridge Co. has been awarded a contract at $3,250 for rebuilding the railway bridge on East High St.

TOLEDO, O.—Bids are asked until March 10 for the substructure of the Black River bridge, according to reports. G. H. Lewis, County Audr.——The council has decided to construct a new bridge at Lafayette St. W. F. Brown, Cy. Engr.

BROWNSTOWN, IND.—A petition has been presented to the county commissioners to construct a bridge 85 ft. long, to cost about $1,200, over Symons' Creek.

MACKSVILLE, IND.—Reports state that Thatcher Parker, Terre Haute, is preparing plans for a new iron structure to replace the Macksville trestle, cost about $15,000.

ST. JOSEPH, MICH.—The west end of the Napier Bridge over the St. Joseph River south of this place was carried away by high water March 1. The structure was built two years ago at a cost of $5,000, according to reports.

DES MOINES, IA.—It has been proposed to have the council consider building a Melan arch bridge at 6th St.

LINCOLN, NEB.—We are informed that the Burlington & Missouri River R. R. in Nebraska will expend about $250,000 this year for iron bridges, culverts and pipe, to replace pile bridges. I. S. P. Weeks, Ch. Engr.

KANSAS CITY, MO.—Permission has been granted to the Metropolitan St. Ry. Co. to construct a viaduct along Eighth St., also to the Brooklyn Ave. St. Ry. Co. to construct a new steel viaduct over Agnes Ave.

COLUMBUS, TEX.—Bids are asked until March 9 for a 30-ft. steel trestle, and for a 48-ft. span steel bridge and approaches. J. J. Mansfield, County Judge.

DENVER, COLO.—Bids are asked until March 14 for two masonry abutments. S. N. Wood, Pres. Dept.

SANTA FE, N. MEX.—Reports state that seven new steel bridges, to cost from $7,000 to $10,000 each, are to be constructed on the Mexican division of the Atchison, Topeka & Santa Fe R. R. Co.

PORTLAND, ORE.—The elevated roadway on East Morrison St. will be rebuilt in the spring.

QUEBEC, QUE.—We are informed that the following submitted bids March 1 for a railway and highway bridge for the Quebec Bridge Co., as advertised in Engineering News: Dominion Bridge Co., Montreal; Keystone Bridge Co., Pittsburg, Pa.; Phoenix Bridge Co., Phoenixville, Pa.; Union Bridge Co., New York.

BUILDINGS

HEBRON, ME.—Blackstone & Smith, Portland, are reported to have been awarded the contract for erecting the new 3-story dormitory building, 165 × 65 ft., for Hebron Academy, at about $60,000.

BURLINGTON, VT.—W. H. Buckley & Co., Burlington, have been awarded the contract for furnishing the heating and ventilating apparatus for the new high school building at $9,100. Huey Bros., Boston, were the next lowest bidders at $10,867.

LAWRENCE, MASS.—Robt. H. Tewksbury, Secy. of High School Commission, informs us that Dick, Driscoll & O'Brien have been awarded the contract for erecting the new high school building, excluding heating, ventilation, plumbing, gas-piping and electric wiring, at $146,563. The other bidders were: L. E. Locke and G. A. Knowles, $190,748; Pitman, Peabody & Pike, $163,981; Lang, Peabody & Pike, $157,936; G. M. Cole & Co. and A. S. Lang, $160,114. John Aston, Arch., Lawrence.

SOUTHBRIDGE, MASS.—Collins & Norton, agents of the Pittsburg Bridge Co., Springfield, Mass., have been awarded the contract for the steel roof, trusses and other iron work for the Southbridge Parochial School. Chickering & O'Connell, Archs., Springfield.

MECHANICSVILLE, N. Y.—Plans have been prepared for a new Methodist church building to be erected in this village; estimated cost, $20,000. A. W. Fuller, Albany.

NEW YORK, N. Y.—Bids are asked by the board of education, 585 Broadway, until March 16, for erecting a new building for Public School 175 at Jerome and Walton Aves., between 184th St. and Fordham Landing Road, Borough of Bronx; also until March 13, for installing a programme clock system in Erasmus Hall High School, Brooklyn; and for alterations, repairs, etc., at Public School 58, Borough of Queens.——Plans have been filed by F. J. Schnugg, 78 East 96th St., for three 5-story brick flat and store buildings at 5th Ave. and 119th St., to cost $64,000. Martin Johnson, Arch., 78 East 96th St.; by E. A. Hoffman, 1 Chelsea Square, for an 8-story brick store and office building at Broadway and Warren St., to cost $150,000. John B. Snook & Sons, Archs., 261 Broadway; by R. Hilbrand, 136 East 16th St., for three 5-story brick tenement buildings at 212 to 216 East 15th St., to cost $54,000. Hubert Drosser, Arch., 93 Nassau St.; by Rosenburg & Feinberg, 177½ Floyd St., Brooklyn, N. Y., for three 6-story flat and store buildings at Stanton and Cannon Sts., to cost $85,000. Horenburger & Straub, Archs., 122 Bowery; by Louis Frank, 60 Montgomery St., for three 6-story flat and store buildings at 270 to 276 Madison St., to cost $60,000. M. Barnstein, Arch., 245 Broadway; by S. Willershausen, 892 West End Ave., for four 5-story brick flat buildings on 90th St., near Columbus Ave., to cost $88,000. M. V. B. Ferndon, Arch., 1293 Broadway; by J. G. Schreiner and others, 104 West 121st St., for sixteen 5-story brick flat and store buildings at 7th Ave. and 140th and 141st St., to cost $582,000. John Hauser, Arch., 1441 3d Ave.; by Conrad Roode, for eight 4-story brick tenement buildings on 155th St. and Morris Ave., to cost $88,000. B. & J. R. Walther, Archs., 205 East 125th St.——The following bids were received by the board of education, Feb. 27, for erecting a new building for Public School 119, 133d St., between 7th and 8th Aves.: P. J. Walsh, 503 8th Ave., $291,000; Luke A. Burke, 401 W. 59th St., $302,500; Mapes-Reeve Construction Co., 156 Nassau St., $309,831; Harry McNally, 287 4th Ave., $293,700; John J. Hopper, 217 W. 125th St., $312,903; Thos. Cockerill & Sons, 550 W. 51st St., $314,900; Murphy Bros., 407 E. 101st St., $303,000; P. Gallagher, 150 5th Ave. (accepted), $289,300.——The following were also received March 2 for a building for Public School 174 on Attorney St., near Rivington St.: H. Probst, 1180 Broadway, $149,900; Luke A. Burke (accepted), $139,000; Henry Booth, 137 E. 122d St. $173,725; Alfred Nugent & Son, 41 Columbia St., $150,400; P. Gallagher, $149,443; P. J. Brennan, 63 W. 22d St., $146,000; Thos. Cockerill & Son, $148,900; Mapes-Reeve Construction Co., $149,465; John H. Parker Co., 256 Broadway, $146,300; Murphy Bros., $144,896; Jas. J. Loonie, 287 4th Ave., $147,750; the Colonial Construction Co., Broadway and 26th St., $164,240.

NEW YORK, N. Y.—Bids are asked by the board of education until March 21 for alterations, etc., to Public School 69 and adjoining building, 123 West 54th St.——Bids are asked by the department of correction, 148 E. 20th St., until April 5 for installing a complete high and low-pressure steam plant, electric lighting, dynamos, elevator and kitchen furnishings, in the new city prison, Borough of Manhattan; two sureties, $75,000 each; also for plumbing and drainage, requiring two $70,000 sureties; also for constructing the steel cells, sureties, $100,000.——The Geo. A. Fuller Co., 160 Fifth Ave., is reported to have secured the contract for erecting a new 18-story office building at Chambers St. and Broadway, to replace the present 5-story structure; estimated cost, $700,000.

TROY, N. Y.—It is reported that the Hakes Bldg. at 4th and Fulton Sts. will be replaced by a new $50,000 building, 130 × 75 ft. Edward Murphy, 2d, Owner.

CAMDEN, N. J.—Anderson & Adams, Philadelphia, Pa., were the lowest bidders, March 7, for installing the heating and ventilating apparatus for the U. S. building in this city, at $4,412; time, 5 mos. The Pittsburg Heating Supply Co., Pittsburg, was the next lowest, at $4,490.

WEEHAWKEN, N. J.—Bids are asked until March 16 for erecting an addition to school No. 2. C. Roehr, Clk.

McKEESPORT, PA.—Daniel Stratton, McKeesport, was the lowest bidder for erecting the new high school building, at $99,650. Plans will have to be modified, as the appropriation is but $80,000. McCullum & Ely, Archs., Washington, Pa.

PHILADELPHIA, PA.—H. C. Nichols & Co. have been awarded the contract for erecting a new 15-room school building at Oxford St. and Glenwood Ave. at $64,900; work to be completed by Dec. 15.

WASHINGTON, D. C.—Bids are asked by the district commissioners until March 11 for constructing an 8-room school building at 12th and D Sts., N. E.

MORGANTOWN, W. VA.—Mechanical Hall of the West Virginia University was destroyed by fire, March 4; reported loss, $50,000.

WILMINGTON, N. C.—Jas C. Munds, Secy. of Masonic Temple Corporation, informs us that the following bids were received March 1 for erecting a new masonic temple building, not including heating plant, plumbing, electric wiring, or elevator, the contract for which will soon be awarded; J. E. Parish, Lynchburg, Va., $30,942; Rose & Barrett, Raleigh, $34,774; N. Ittner, Atlanta, $34,885; D. Gatez & Co., Knoxville (accepted), $30,251; J. C. Stout, Wilmington, $31,991; F. Wagner, Atlanta, $48,580; W. E. Spier, Washington, $38,400; J. E. Moore, Walterboro, S. C., $34,500.

BIRMINGHAM, ALA.—Bids are asked by the Hillman Hospital Association until April 15 for erecting a 3-story brick hospital building, to cost about $30,000. Mrs. T. H. Molton, Pres.

MONROE, LA.—The plans of J. W. Gaddis, Vincennes, Ind., have been selected for the new City Central high school building, to cost about $30,000.

WEST POINT, MISS.—A fire here, March 6, destroyed property valued at about $30,000, including the Mary Holmes College and Industrial School buildings.

LEXINGTON, KY.—Bids are asked by the trustees of the Kentucky Houses of Reform until March 14 for the boilers and steam fitting, hot and cold water and sanitary plumbing, sewage, water-works, electric lighting, etc., for the boiler house and manual training buildings. W. P. Walton, Secy.; Richards & McCarty, Archs., Columbus, O.

LOUISVILLE, KY.—The round house of the Illinois Central Ry. and other buildings were burned, March 1; estimated loss, $125,000.

WARREN, O.—The proposition to issue $30,000 in bonds for a new school building will be voted upon in April.

CLEVELAND, O.—Bids are asked until March 25 for erecting a 12-room addition to the Sowinski school building. H. Q. Sargent, School Director.

DETROIT, MICH.—H. Carew & Co., 210 Joseph Campan Ave., were the lowest bidders for the iron and masonry work on the county buildings, at $62,068. J. Scott, Arch.

CHICAGO, ILL.—It is reported that the Wesley Hospital Association will build a new 6-story brick and stone hospital building this spring, at 25th and Dearborn Sts., to cost $200,000. Robt. D. Sheppard, Pres.——Plans are being prepared for a new 4-story apartment building at 3756 to 3766 Ellis Ave., to cost about $100,000. W. F. Pagels, Arch., Unity Bldg.——The board of education is considering the following improvements to school accommodation: Madison Ave. School, one wing, boiler house and steam plant, $45,000; Prescott, 12-room addition, $45,000; Irving Park, new building, 12 rooms, $45,000; Avondale, 16-room addition, $75,000; Polk St., new building, 22 rooms, $85,000; West Pullman, 12-room addition, $50,000; Auburn Park, 6-room addition, $25,000; Calumet Ave. and 41st St., new building, 22 rooms, $80,000; Calumet Ave. and 27th St., 16 rooms, $65,000.

YATES CENTER, KAN.—George P. Washburn, Arch., Ottawa, Kan., informs us that bids will be asked early in April for erecting a new $30,000 court house and jail for Woodson county.

BUFFALO, MINN.—The New Prague Mfg. Co., New Prague, Minn., has received the contract for a steam heating plant for the court house, at $1,300.

WELLS, MINN.—Bids are asked by the board of education until April 3 for erecting a school building at Wells; also for the pan system of heating and for plumbing. B. Bieri, Secy.; Orff & Guilbert, Archs., Minneapolis.

PONCA, NEB.—Sam Bittenbender, Secy. Bd. of Education, informs us that the following bids were received Feb. 28 for erecting a new school building: Sheffle & Sinanburgh, Ponca, $13,557; R. C. Cushman, Omaha, $20,550; Erick Nylen, Vermillion, S. Dak. (accepted), $11,580; H. Wind, Council Bluffs, Ia., $11,844; J. W. Detwiler, Des Moines, Ia., $13,464; Frank Moore, Colfax, Ia., $11,501; M. E. Bush, Des Moines, $13,500; P. J. Creedon, Omaha, $11,200; J. J. Keefe, Sioux City, Ia., $13,300.

MONTGOMERY, TEX.—Bids are asked until March 23 for erecting a 2-story fireproof vault; bond, $10,000. M. S. Cooper, County Judge.

UVALDE, TEX.—Bids are asked until March 30 for erecting a county jail; cost, $12,000. H. J. Bowles, Clk.

UPTERGROVE, ONT.—Bids are asked until March 20 for erecting a brick school building at this place. Peter Thomson, Secy.; Thos. Kennedy & Co., Archs., Barrie.

WATER-WORKS.

BOSTON, MASS.—Bids are asked until March 14 for furnishing during the year about 1,350,000 lbs. of small iron castings. J. R. Murphy, Water Comr.

BOSTON, MASS.—We are informed that the metropolitan water board will do considerable work near Clinton in connection with the Wachusett reservoir. One contract, to be let within a month, will be the removal of 315,000 cu. yds. of earth, besides other work. Later in the spring a contract will be let for stripping 3,000,000 yds. of soil from the surface of the reservoir, besides other contracts for earthwork, the largest involving the removal of 150,000 yds. Plans are being prepared for improving Spot Pond, seven miles from Boston. About 750,000 yds. of earth will be removed. Filter beds with an area of about 15 acres will be built near Marlboro Junction. About 2½ miles of 20 and 24-in. cast iron water pipe will be laid to supply water to Arlington. The contract for the masonry dam for the Wachusett reservoir will not be let this spring. The advertisements for bids for all this work will appear in our columns. F. P. Stearns, Ch. Engr.; N. W. Davenport, Secy.

HOLDEN, MASS.—At the town meeting on March 20 steps will probably be taken towards securing a water supply from Lake Muschopauge, four miles distant. The works will cost $40,000. P. E. Parker may be addressed.

EAST HAMPTON, CONN.—The Chatham Water Co. has applied for a charter to supply this place with water from Lake Pocotopaug. A standpipe 75 ft. high will be built. E. W. Shedd, New York, and F. W. Siebert, Waterbury.

WATERBURY, CONN.—Bids are asked until March 14 for laying about 1,000 ft. of 20-in. water pipe, 150 ft. of 16-in. pipe in paved street and 600 ft. of 12-in. in dirt road. Check, $300. R. A. Cairns, Cy. Engr.

BINGHAMTON, N. Y.—Darwin Felter, Supt., writes us that bids will probably be wanted in April for deepening three wells, at the pumping station, five feet. John Anderson, Secy.

BROOKLYN, N. Y.—Bids are asked until March 23 for furnishing and laying water mains in a number of streets. Wm. Dalton, Comr. Water Supply, 150 Nassau St., Manmattan Borough.——Plans and specifications are being prepared, and bids will soon be asked for the contracts to construct the 66-in. conduit from Milburn Reservoir to Spring Creek Engine House. The board of public improvements several weeks ago authorized this work, and the only obstacle to the speedy execution has been the contract awarded to John McNamee, the Brooklyn contractor, before consolidation. The McNamee contract price was $853,000. The new estimate, by changes in the specifications, is $1,010,000. The pipe will be three-quarters of an inch thick the entire length.

DELHI, N. Y.—We are informed that the proposition to build a small masonry reservoir and a sand filter will be voted upon March 21. E. F. Musson, Engr., Norwich.

FILLMORE, N. Y.—The question of building works for this place and Hume is being considered. The supply will be secured from a spring three miles from here.

FORESTPORT, N. Y.—Bids are asked until April 15 for building works to cost about $10,000, according to reports. C. E. Phelps, Engr., Aldencreek, N. Y. The Forestport Water Co. was incorporated in July with a capital of $10,000, by Chas. O'Connor, F. X. Salzman and others.

MASSENA, N. Y.—The St. Lawrence Water Co. has been incorporated with a capital stock of $30,000, by Thos. A. Gillespie, Engr., Havemeyer Bldg., New York; Robt. Swan, Massena; E. M. Powers, Port Richmond; and T. S. Ten Eyck, Flushing, N. Y. The Massena Water Co. was incorporated recently by W. B. Berry and others.

NEWBURG, N. Y.—D. F. Coutant, Cy. Clk., writes us that an election was called for March 7 to vote on the question of appropriating $274,000 for a new reservoir, furnishing and laying 24,200 ft. of 30-in. iron pipe, hydrants, gate-house, etc.

NEW YORK, N. Y.—Col. A. S. Kimball, Quartermaster's Dept., Army Bldg., received the following bids March 7 for a complete apparatus for boring artesian wells to a depth of 600 ft., including 700 ft. of 6-in. pipe, with couplings, etc.; also on pipe and fittings: John Simmons & Co., well machinery, etc., $1,602 for the lot; pipe fittings, etc., $1,288. Cornell, Underhill & Boyd, first lot, $1,485; second lot, $1,284. Crane & Co., first lot, $1,540; second lot, $1,390. Manhattan Supply Co., first lot, $1,788; second lot, $1,533. Leonard McCoy, on solider and muriatic acid, $150. Artesian Well Drilling Co., well, $1,720; second lot, $1,468. Edw. F. Keating, second lot, $1,411. Chas. D. Pierce, well, $1,457; on 700 ft. of pipe in the second lot, $420; wrought iron pipe, $462; the second lot, $1,646.

ROCHESTER, N. Y.—Bids have been asked by the executive board for laying a main in Caladonia Ave.

SCHROON LAKE, N. Y.—This place has decided to put in works, according to reports.

WAPPINGERS FALLS, N. Y.—An election will be held March 21 to vote on the question of issuing $50,000 in bonds for works.

WINDSOR, N. Y.—Bids are asked until March 23 for furnishing the materials and for constructing gravity works, as stated in our advertising columns. J. F. Witmer, Ellicott Square, Buffalo; M. A. Tompkins, Clk.

ASBURY PARK, N. J.—The East Jersey Coast Water Co., which has absorbed the partly constructed works in Neptune township, and was recently granted a franchise to complete the plant, has let the contract for laying the additional mains to S. L. Bartholomew, of Asbury Park. Jas. H. Dawes, Supt.

JERSEY CITY, N. J.—Mayor Hoos signed the contract Feb. 28 for a new water supply awarded to Patrick H. Flynn, Brooklyn. On March 2 borings for the supply were begun on the Rockaway River, near Boonton, where the new reservoir is to be located.

NEWARK, N. J.—The commissioners have voted down the proposition of Mr. Van Duyne asking for bids for 10,000 water meters. There is talk of building a new reservoir. A. J. Connolly has submitted a proposition to furnish 10,000,000 gallons of water a day from wells for $10,000. The board will ask Alphonse Fteley, Stewart Bldg., New York, to assist in finding a reservoir site.

CANONSBURG, PA.—We are informed that this place is figuring on municipal works.

CONNEAUTVILLE, PA.—This place voted Feb. 21 to issue $10,500 in bonds for works.

MONESSEN, PA.—Plans for works to cost $15,000 (exclusive of pumping machinery) are being prepared, according to reports.

PHILADELPHIA, PA.—Bids are asked until April 11 for furnishing two 5,000,000-gallon pumping engines for the Roxborough station, to cost $100,000, and pump chambers and valves for engine Nos. 2 and 3, Spring Garden station. T. M. Thompson, Dir. Pub. Wks.

ROCHESTER, PA.—Several citizens have organized the Consumers' Water Co.

SCRANTON, PA.—The Consolidated Water Supply Co. has been incorporated to supply water in Lackawanna and Susquehanna counties; capital stock, $400,000, with $40,000 paid in; incorporators, John Jermyn, Treas.; Wm. A. May, Scranton; Levi A. Patterson, Carbondale, Pa.

SOUTH BETHLEHEM, PA.—The Mountain Water Co. is considering plans for extending the works in the spring. A. L. Cope, Secy.

SPRINGBORO, PA.—R. R. Seelye, Burgess, writes us that this place has voted to issue $8,500 in bonds for gravity works. The new council, which came in March 6, will begin at once to make tests for a supply and will have surveys made and let the contracts.

LAUREL, DEL.—This place voted, March 1, to build works. Population (1890), 2 388.

WASHINGTON, D. C.—Bids are asked by the district commissioners until April 1, for furnishing fire hydrants, as stated in our advertising columns.

BALTIMORE, MD.—Bids are asked by the water board for installing auxiliary piping at the Mt. Royal station.

WHEELING, W. VA.—Extensions will soon be made to certain 12 and 24-in. mains.

HIGHPOINT, N. C.—Surveyor Richardson, of Greensboro, N. C., has been engaged to make surveys for works and a sewerage system. This place will now vote on the question of issuing $50,000 in bonds. W. G. Bradshaw, Mayor.

ROCKINGHAM, N. C.—This place has been granted authority to issue bonds for works to supply about 125,000 gallons a day. W. N. Everett, Mayor.

TARBORO, N. C.—This place has been granted permission to issue $40,000 in bonds for improving the works. J. A. Weddell, Clk.

BIRMINGHAM, ALA.—The legislature has passed the bill authorizing this city to issue bonds for municipal works.

CULLMAN, ALA.—Bids are asked by the city clerk for constructing works and a light plant, to cost $35,000. R. M. Newbold & Co., Engrs., Birmingham, Ala.

MONTGOMERY, ALA.—Bids are asked until noon March 11 for extending the air lift pumping plant at the works. G. A. Ellis, Consult. Engr.; R. H. Sommerville, Cy. Treas.

FAYETTEVILLE, TENN.—J. E. Poindexter, Cy. Clk., writes us that Feder, Holzman & Co., Cincinnati, O., have purchased $30,000 of 5% water bonds at a premium of $1,855. Bids for building the works are asked until March 15, as advertised in Engineering News Feb. 9.

SPRINGFIELD, TENN.—H. E. Butcher, who is building an electric plant, also proposes to build works.

CLOVERPORT, KY.—A company has been organized to build works to cost $2,500.

LEXINGTON, KY.—Bids are asked until March 14 for constructing works, a sewerage system, etc., for the manual training buildings of the Kentucky houses of reform. W. P. Walton, Secy. Bd. Trustees.——A committee of the council has been appointed to consider the advisability of purchasing the works of the Lexington Hydraulic & Mfg. Co. The plant is valued at about $500,000. Councilman B. D. Bell may be addressed.

CLEVELAND, O.—Bids are asked until March 17 for constructing water and sewer pipe connections in a number of streets. Geo. R. Warden, Dir. Pub. Wks.——The council has authorized the director to ask for bids for constructing the Kirkland St. pumping station, to cost about $150,000, exclusive of pumps, etc.

JACKSON, O.—Jas. Kinney, Jr., Bellaire, O., and S. C. Boyer, Jr., have been granted permission to build works. We are informed that the contract was ratified by vote on March 6. Work of sinking wells will be begun at once. No other contracts will be let until supply is secured. There will be required two 1,000,000-gallon pumps, a stand-pipe, 75 hydrants, 8 miles of pipe, two 100-HP. boilers, and air-lift plant, etc. The supply will be from wells and streams. M. D. Jones, Cy. Clk.

LAKEWOOD, O.—Bids are asked until 12 m., March 9, for furnishing the materials and for laying a 6-in. main in several streets. U. W. Hird, Clk.

SCIO, O.—We are informed that this place voted March 2 to grant a franchise for works to W. F. Stewart & Co. There will be required four miles of pipe, 1,000,000-gallon pumping plant, and steel storage tanks. The supply will be secured from drilled wells. Plans will be completed in a few days. E. J. Millar, 303 Peabody Bldg., Wheeling, W. Va.

WARREN, O.—The question of putting in meters is being considered by the Warren Water Co.

LAPORTE, IND.—Press reports state that the council has voted to ask for bids for furnishing four miles of 20-in. mains for the new supply from the Little Kankakee River, at Messenger Crossing. A new pumping station will be built. Estimated cost, $70,000. Prof. Chas. E. Greene, Consult. Engr., Ann Arbor, Mich.; C. F. Leimann, Chn. Com. We are informed that specifications are not complete. Bids will soon be wanted for 27,000 ft. of 16, 18 and 20-in. steel riveted and cast-iron pipe. L. Darrow, Mayor.

PENDLETON, IND.—The Pendleton Water & Light Co. has been incorporated, with a capital stock of $50,000, by John H. Brown, Geo. Mayer and B. O. Mayer, of Chicago. It is stated that the council is considering the question of municipal works.

SEYMOUR, IND.—The legislature has been asked to grant this place authority to purchase the works of the Seymour Water Co.

SOUTH BEND, IND.—Bids are asked until March 29 for furnishing and installing a new 8,000,000-gallon pump. W. H. Roseliius, Cy.Engr.; J. F. Kelley, Pres. Bd.

MOUNT PLEASANT, MICH.—The following submitted bids March 1 for constructing works and a sewerage system at the Indian school: B. D. Barton, Port Michigan, Mich., $8,100 and $7,955; Thos. Manion, Toledo, O., $8,-997; Brown Bros., Saginaw, Mich., $5,200 and $4,671; J. R. Miller & Co., Chicago, $9,208.

ALTON, ILL.—Geo. T. Davis writes us that the question of municipal ownership will be voted upon April 18.

PEORIA, ILL.—The park board has decided to sink two test wells for an increased water supply.

QUINCY, ILL.—The Quincy Water-Works Co. has asked for permission to lay additional mains, beginning March 20.

WHITEHALL, ILL.—The Whitehall Electric Co. has been awarded the contract to build works, at a cost of $11,000, and to supply water for 10 years at $155 a month. T. A. Chapin, Cy. Engr.

DUBUQUE, IA.—C. H. Berg, Mayor, has served notice on the Dubuque Water Co. that the city proposes to purchase the works, and has asked the company to fix a price. The company let a contract Feb. 27 to Peter Eisbach for the foundation for the new building, 53 x 130 ft., at Eagle Point. There will be a reservoir of 20,000,000 gallons and 20 filters of 500,000 gallons each. An engine and pump house will be built. The pumps have been purchased. Peter Kiene, Pres.

GARWIN, IA.—The question of building works is being considered. A. E. Bufkin, Cy. Engr. of Toledo, Ia., has been given data.

OSAGE, IA.—The Osage Water Co. has been incorporated, with a capital stock of $17,000, by J. W. Annis, Chas. Sweney and others. G. H. Meredith, Cedar Rapids, Ia., prepared plans last year for works to cost $28,000, as noted in our issue of Dec. 1.

AUSTIN, MINN.—Wm. Todd, Supt., writes us that bids will be wanted early in April for furnishing 3,500 ft. of 20-in. culvert pipe, 300 ft. of 20-in. Root's spiral riveted pipe, 5,700 ft. of 15-in. pipe and 1,600 ft. of spiral riveted; estimated cost, $14,950.

MOUNTAIN LAKE, MINN.—H. P. Goertz, Pres., writes us that the question of building works will be voted upon March 14.

RED LAKE FALLS, MINN.—D. I. Genning, Mayor, writes us that the legislature has been asked to grant this place authority to vote on the question of issuing bonds for works; estimated cost, $12,000.

WYKOFF, MINN.—An election will be held March 14 to vote on the question of building works.

LANSING, KAN.—The legislature has appointed a committee to investigate the water supply of the state prison in this city.

KIRKSVILLE, MO.—W. H. Miner has been awarded the contract for building the filter at the works.

MARIANNA, ARK.—It is proposed to build works at a cost of $16,000, according to reports. Owen Ford, Engr., Security Bldg., St. Louis.

HOUSTON, TEX.—Alexander Potter, 137 Broadway, New York, has been retained to make recommendations as to the best course the city should pursue to own the works. J. A. Miller, Cy. Engr.; S. H. Brashear, Mayor.

SHERMAN, TEX.—The aldermen have voted to appropriate $21,200 for improving the works and for an electric plant, according to reports.

DARLINGTON, OKLA.—Bids are asked until March 28 for constructing works at the Arapahoe Indian school. W. A. Jones, Comr. Indian Affairs, Dept. Interior, Washington.

GOLDHILL, ORE.—W. A. Carter, Recdr., writes us that bids will be asked until about April 1 for constructing works. Population, about 700.

NORTHPORT, WASH.—It is probable that an election will be held to vote on the question of issuing $10,000 in bonds for works.

FAIRHAVEN, WASH.—T. W. Gillette, Supt., writes us that bids will be asked until about March 20 for 4,700 ft. of 20-in. wood stave pipe for the works of the Fairhaven City Water & Power Co.

CRIPPLE CREEK, COLO.—H. R. Ingersoll, Denver, has been granted a franchise for works, according to reports.

GOLDEN, COLO.—This city voted March 1 to issue $48,000 in 5% bonds for new works.

PHOENIX, ARIZ.—Councilman C. J. Dyer writes us that data concerning municipal works are wanted. At the election recently held the question of issuing bonds for works and a sewerage system was defeated. Another vote will be taken in a few months, and all the information possible is wanted. G. A. Davison, Cy. Engr.

CIENFUEGOS, CUBA.—Bids are asked until March 24 for propositions for establishing works and a sewerage system, as stated in our advertising columns. Jose A. Frias, Mayor; Benj. Giberza, Cuban Delegation, 56 New St., New York, can give information.

GODERICH, ONT.—The legislature is reported to have passed the bill authorizing this place to complete the works, and to extend the electric plant at a cost of $25,000. Wm. Mitchell, Clk.

HINTONBURG, ONT.—C. H. Keefer, Ottawa, Ont., has submitted plans for works. The pumps will have a capacity of 2,000,000 gallons a day, the supply being secured from the Ottawa. F. J. Merrill, Deputy, Reeve.

STIRLING, ONT.—Propositions are wanted until March 10 for preparing plans, etc., for works to cost $20,000, and for superintending the construction. J. S. Black, Clk.

HULL, QUE.—The Taylor Compressed Air Co. has offered to install new works for $39,600.

WINNIPEG, MAN.—Bids are asked until April 3 for furnishing 100 tons pig lead, 75 tons lead pipe, 2,000 corporation cocks, 2,000 sidewalk cocks, 2,000 house stop and waste cocks, 2,000 ¾-in., 200 ¾-in., 100 1-in. and 10 2-in. meters, and for furnishing two 5,000,000-gallon pumping engines, as stated in our issue of Feb. 9. H. N. Ruttan, Cy. Engr.; C. J. Brown, Cy. Clk.

VICTORIA, B. C.—J. W. Warren & Co. have been awarded the contract for furnishing brass goods for the water department, at $1,865.

BRISTOL, ENGLAND.—Bids are asked until March 25 for two pairs of steam compound beam pumping engines, six boilers with mechanical stokers, two fuel economizers, etc., for the Yeo pumping station. T. & C. Hawksley, Engrs., 30 Great George St., Westminster, London; A. J. Alexander, Gen. Mgr.

SEWERAGE.

EXETER, N. H.—It is proposed to build a system for the west side, embracing the territory west of the tracks of the western division of the B. & M. R. R., and a system of settling tanks and filter beds for the same. It is probable that an appropriation will be made by the council on March 14.

BOSTON, MASS.—Bids are asked until March 15 for furnishing sewers, castings, tide-gate frames, covers, etc. B. W. Wells, Supt. Sts.

CLINTON, MASS.—Bids are asked by the Metropolitan Water Board, 3 Mount Vernon St., Boston, until March 21, for completing Section 2 of the Clinton sewerage system, as stated in our advertising columns. F. F. Stearns, Ch. Engr.; W. N. Davenport, Secy.

MELROSE, MASS.—We are informed that the system for this city is nearly completed. About $35,000 worth of work will be done this coming season. A portion of this work will be in connecting houses, and all will be done by day labor. W. D. Hunter, Ch. Engr. and Supt. of Sewers and Clk. Bd. Sewer Comrs.

REVERE, MASS.—Bids are asked until 8 p. m. March 11 for constructing about 1,400 ft. of pipe sewer in Ocean Ave. Whitman & Howard, Engrs., 85 Devonshire St., Boston; W. H. Lawrence, Chr. Com.

WATERBURY, CONN.—Bids are asked until March 14 for 3,000 ft. of 15 to 8-in. pipe sewers; average cut, 10 ft. R. A. Cairns, Cy. Engr.

BUFFALO, N. Y.—Rudolph Hering, 100 William St., New York, has submitted his report on the plans for abating the Hamburg Canal nuisance and for improving certain sewers prepared by F. V. E. Bardol, Cy. Engr.

JOHNSTOWN, N. Y.—Prof. Olin H. Landreth, Union College, Schenectady, N. Y., has submitted a report for a new system. An intercepting sewer is recommended from the eastern line of the city across the city to Stewart's Pond and thence to the point of disposal. A filtration system of disposal will probably be required. J. E. Burdick, Mayor.

LOCKPORT, N. Y.—We are informed that a contract will probably be let by the city clerk, March 27, for 2,000 ft. of 10, 12 and 15-in. sewers and 2,000 ft. of 6-in. water pipe, in Pine St. Chas. H. Carnes, Cy. Engr.

SARATOGA SPRINGS, N. Y.—Prof. Olin H. Landreth, of the Engineering School of Union College, Schenectady, N. Y., has been engaged by the authorities to make an examination and report on the matter of sewage disposal for the village. Jesse S. Mott, Village Engr.

KEARNEY, N. J.—Bids are asked by the council until March 28 for constructing pipe sewers in the southwesterly section of the town, comprising about two miles of storm water sewer. Wm. S. Logan, Town Engr., Arlington, N. J.

LONG BRANCH, N. J.—It is stated that the Long Branch Sewer Co. will soon begin the extension of its outlet at the foot of North Broadway. The new outlet will extend 150 ft. further than the present one. Instead of resting on jetties it will be submerged, having a casting at the outer end to imbed it in the clay. Two 1,200-lb. weights will be sunk to keep the piping into position. The entire line will measure nearly 600 ft., made of 12-in. pipe.

NEWARK, N. J.—The lower house of the legislature has passed the bill authorizing the construction of the joint trunk sewers to be built by Newark, Vailsburg, Irvington, South Orange and Millburn.

PATERSON, N. J.—It is proposed to construct about 3,500 ft. of 18 to 12-in. sewers. Thos. McLean, St. Comr.

PLAINFIELD, N. J.—Bids are asked until March 13 for constructing 2,224 ft. of 12 and 10-in. cast-iron pipe sewers, about 3,500 ft. of 15 to 4-in. under-drain, etc. A. J. Gavett, Engr.; J. T. McMurray, Cy. Clk.

TRENTON, N. J.—It is proposed to construct sewers in a number of streets. C. Edward Murray, Cy. Clk.

STEELTON, PA.—The following bids were received Feb. 28 for constructing the system, the contract for pipe having been let to A. M. Pierson & Co., 1 Park Row, New York, as noted in our issue of Feb. 16: G. R. Alleman, Steelton, $49,690; W. H. H. Achuff, Philadelphia, $63,-227; A. H. Coon, Kingston, $34,625; J. S. Sible, Harrisburg, $43,631; John Jacoby, Wilmington, Del., $37,931; R. A. Malone, Lancaster, $42,336; Girard Construction Co., Philadelphia, $49,252; Callary, Murphy & Berkery, Weehawken, N. J., $33,500; Erwin Bros., Greenville, O. (accepted), $33,248. Alex. Potter, Engr., 137 Broadway, N.Y.

WILKES-BARRE, PA.—Bids are asked until 12 noon, March 11, for furnishing the materials and for constructing certain pipe sewers. S. R. Catlin, Chn. Com.; Frank Deitrick, Cy. Clk.——It is probable that a vote on the question of issuing $100,000 in bonds for the Empire St. sewer will be taken in May.

LEWES, DEL.—It is stated that improvements are needed to the system.

WASHINGTON, D. C.—For the general extension of the sewerage system $383,000 has been appropriated, as follows: Main and pipe sewers, $50,000; completing contract for Tiber Creek and New Jersey Ave. high-level interceptor, $88,000; building northerly portion of Tiber Creek and New Jersey Ave. high-level interceptor, $130,000; extension of Florida Ave. sewer, $25,000; part of east side interceptor, $20,000, between 22d and A Sts., N. E., and 12th St., S. E.; constructing in part east side interceptor, from 12th St., S. E., to pumping station, $20,000. The commissioners are authorized to enter into contracts for continuing the three last-named lines at a cost of $426,000.

WAYCROSS, GA.—An election will be held April 1 to vote on the question of issuing $50,000 in 5% 30-year bonds for a system.

JACKSON, MISS.—S. M. Taylor, Mayor, writes us that this city proposes to vote on the question of issuing $100,000 in bonds for a system, and perhaps bonds for paving. It is probable that the bonds will be issued about April 1, if favorably voted upon.

MEMPHIS, TENN.—Jas. H. Elliott, Asst. Engr.-in-Charge of Sewers, has submitted a report, plans and estimates on the following sewers for the unsewered districts of the old city, and for the annexed districts: Auction St., 48, 42 and 30-in. brick sewer and branches, 27 to 6-in. pipe, to cost $319,309; Georgia St., 36 to 6-in. pipe sewers, $112,527; Gayoso St., 15 to 6-in. sub-main sewer and branches, to cost $20,769. In the three sewers and branches there will be 390,729 ft. J. J. Williams, Mayor.

CINCINNATI, O.—Peter Jonte & Son, 134 East Court St., Cincinnati, submitted the lowest bid, at $72,300, March 3, for constructing the Camp Washington sewer. Strack & Son submitted the next lowest bid, at $73,659.

MARTINSVILLE, IND.—C. G. H. Goss, Cy.Engr., writes us that the council has ordered plans for a system.

LAKE LINDEN, MICH.—This place will vote, March 13, on the question of issuing $30,000 in bonds for a system.

MARSHALL, MICH.—This place will vote on a proposition to issue $25,000 in bonds for a system at the coming election. Riggs & Sherman, Engrs., The Nasby, Toledo, O.

WYANDOTTE, MICH.—An election is to be held to vote on the question of issuing $40,000 in bonds for construction of sewers to cost $38,000. J. D. Cook, Engr.

HAVANA, ILL.—Bids are asked until April 1 for furnishing the materials and for constructing 1,055 lin. ft. 48-in., 800 lin. ft. 24 x 36-in., 400 lin. ft. 22 x 33-in. brick sewers, 420 lin. ft. 12-in. pipe sewer, manholes, etc., as stated in our advertising columns. H. C. Breidert, Cy. Engr.

MADISON, ILL.—Jos. S. Simmons, Edwardsville, Ill., is reported as preparing plans for system. It is proposed to pump the sewage over the dikes which protect the city.

CHARLES CITY, IA.—W. W. Dennis, Cy. Clk., writes us that it is proposed to build about 10,600 ft. of 24 to 10-in. pipe and 80 ft. of 36-in. brick sewer. It is probable that 7,620 ft. additional of 12-in. pipe sewer will be ordered. Alvord & Shields, Engrs., 1140 The Rookery, Chicago.

OTTUMWA, IA.—It is proposed to build two miles of 6-ft. main sewer, and several miles of pipe sewer in South Ottumwa this spring. Mayor Phillips; John Brady, Cy. Engr.; Thos. Keefe, Chn. Com.

GREAT FALLS, MONT.—The question of building additional sewers is being considered.

BROOKFIELD, MO.—The question of building a system will probably soon be voted upon. Population, 7,000.

HOUSTON, TEX.—Alexander Potter, 137 Broadway, New York, has been retained to devise plans for public improvements. The improvements contemplated include the purification of the sewage of the entire city, revision of the present plan of sewerage in such a way as to secure distinct and separate conduits for sewage and rain water; the construction of a garbage disposal plant, etc. J. A. Miller, Cy. Engr.; S. H. Brashear, Mayor; H. H. Dickson, Chn. Com.

FOLSOM, CAL.—The legislature has passed a new bill for a system for the state prison at Folsom, to cost $15,000. The money is available Jan. 1, 1900, and the work will be in charge of the board of examiners.

OAKLAND, CAL.—The council has voted to appropriate $50,000 for a storm water sewer through Cemetery Creek.

CIENFUEGOS, CUBA.—Propositions are asked until March 24 for establishing a system and water-works in this city, as stated in our advertising columns. Jose A. Frias, Mayor; Benj. Giberza, Cuban Delegation, 56 New St., New York, can give information.

OTTAWA, ONT.—Laverdure & Laflamme, Ottawa, are reported to have refused to sign the contract for Section 3 of the proposed new trunk sewer, at $107,695. The contract has, therefore, been let to Jos. Bourque, Hull, Que., at $127,000. The entire system will cost about $1,000,000.

JOHANNESBURG, TRANSVAAL, S. AFRICA.—It is stated that the town council has decided to ask for new bids until about May 30 for constructing the system.

GARBAGE DISPOSAL—STREET CLEANING

LOWELL, MASS.—Alderman L. A. Derby writes us that the city is asking for information on disposal plants.

CAMDEN, N. J.—L. E. Farnham, Cy. Engr., writes us that a contract has been awarded to B. F. Howland, Philadelphia, to dispose of garbage for $150 per month. The garbage is to be separated from other combustible matter. The city has a 60-ton Dixon furnace in operation, but a reduction in cost to the city is claimed for the new utilization process. No details of the process have been presented.

PLAINFIELD, N. J.—The question of purchasing the plant of the Plainfield Sanitary Co. is being considered.

DOVER, N. J.—Bids are asked until March 13 for removing the ashes and garbage for one year from April 1. Jos. V. Baker, Cy. Clk.

CHESTER, PA.—The council is considering the cost of a disposal plant.

GREENVILLE, MISS.—It is proposed to build a disposal plant, according to reports.

LAFAYETTE, IND.—The question of disposing of the present crematory and of getting a new one is being considered. Councilman Rankin may be addressed.

SOUTH BEND, IND.—The council is securing information for a crematory.

MILWAUKEE, WIS.—Mayor Rose insists that the city shall not let a contract to the Wisconsin Rendering Co., but must build a municipal plant. S. J. Richter, of the committee of health, writes us that the Engle Sanitary & Cremation Co., Des Moines, Ia., has the contract for building a municipal plant.

STREETS AND ROADS

BARRE, MASS.—C. H. Fallansby, Chn. Selectmen, informs us that this town is in the market for a portable rock crusher and engine.

CHARLESTOWN, MASS.—The board of estimate and apportionment is considering the proposed extension and widening of Rutherford Ave.

BATH, N. Y.—A proposition is being presented to the people to have a bill passed in the legislature authorizing the paving of the village streets on a 20-year installment plan.

BUFFALO, N. Y.—Bids are asked until March 15 for constructing and repairing wooden sidewalks for three years. R. G. Parsons, Secy. Bd. Pub. Wks.

POUGHKEEPSIE, N. Y.—Bids are asked until March 14 for furnishing crushed stone. Chas. E. Fowler, Supt. Bd.

ROCHESTER, N. Y.—Bids are asked until March 13 for asphalt paving on Pindell Alley, estimated cost, $5,500; North Clinton St., asphalt, $54,700; North Clinton St., stone block, $66,000. C. M. Beattie, Clk. Executive Bd.

SCHENECTADY, N. Y.—H. S. Moore informs us that a petition presented to the council for the paving of upper State St. with brick has not yet been passed upon, but will probably pass at the March meeting.

UTICA, N. Y.—The council has passed resolutions to pave on five streets. Designations will be made March 17.

ASBURY PARK, N. J.—D. Howard, of the St. Com., informs us that bids will be asked for grading and graveling on Bond and Emery Sts. and Sewall Ave. Wm. C. Burroughs, Cy. Clk.

ATLANTIC CITY, N. J.—An ordinance has been presented to the council for paving Arctic Ave. between Vermont and Texas Aves. with brick.

JERSEY CITY, N. J.—It is proposed to construct a boulevard from the Hudson County Boulevard at Manhattan Ave., westward past Snake Hill to Arlington.——A petition has been presented to the street and water board for asphalt paving on Newark Ave.

NEWARK, N. J.—Baldwin St. will be macadamized from Main to William Sts.

BETHLEHEM, PA.—A committee of the board of trade has submitted a proposition to the county commissioners, Easton, Pa., to have the question of macadamizing the road from Bethlehem to Nazareth, a distance of about nine miles, brought before the April session of the grand jury.

MEADVILLE, PA.—W. A. Doane, Cy. Engr., informs us that it is proposed to construct about 27,920 sq. yds. of brick paving and 17,605 lin. ft. of curb this year. Ordinances have not been finally passed.

PHILADELPHIA, PA.—An ordinance has been presented to councils to appropriate $2,000,000 for paving.

PITTSBURG, PA.—The county commissioners have prepared for presentation to the quarter sessions court petitions for the improvement of five new roads, aggregating about 67 miles. They have under advisement the improvement of 12 more roads.

ROCHESTER, PA.—J. P. Leaf, Cy. Engr., informs us that the council has passed ordinances for paving Railroad St. with brick. Work will begin about June.

SHARPSBURG, PA.—E. C. Hulbert, Borough Engr., informs us that a contract has been awarded to Booth & Flinn, Pittsburg, Pa., for about 12,000 sq. yds. of asphalt paving, 28,000 sq. yds. of brick and 4,000 sq. yds. of block stone. No other work is contemplated.

WASHINGTON, PA.—George D. Jenkins, Borough Engr., informs us that $60,000 of bonds will be issued for paving. Several thousand dollars' worth of work in adjoining boroughs will be finished this coming summer.

CHARLOTTESVILLE, VA.—A. C. Reecker, Cy. Engr., writes us that there is no work being considered at present, but as soon as the street fund is replenished it is anticipated to pave a portion of Main St. Several bids have been received on brick. The question will probably be decided by July.

RALEIGH, N. C.—W. Z. Blake, St. Comr., informs us that the city has under consideration the advisability of purchasing a new rock crusher.

ATHENS, GA.—J. W. Barnett, Cy. Engr., writes us that $100,000 for street improvements was voted Feb. 27. Brick, Belgian block and macadam will be used. The city will do the work, but purchase material for brick and block pavement.

NEW ORLEANS, LA.—The committee has received bids for paving on Ursulines St., with asphalt, from the Barber Asphalt Co., at $39,642; Ayres Asphalt Co., $38,461; Belden & Seely, $35,979.

MORRISTOWN, TENN.—A bill will be presented to the legislature to authorize the issue of $50,000 for new turnpikes, according to reports. B. F. Stubblefield, Chn.

LOUISVILLE, KY.—Bids are asked until March 16 for grading on Grand Ave. Thos. P. Craig, Secy. Bd.

COLUMBUS, O.—Bids are asked until March 14 for grading five streets. Jas. A. Fanning, Clk. Bd. Pub. Wks.

FLINT, MICH.—Bids are asked until March 15 for furnishing brick to pave about 16,050 sq. yds. Fred. P. Baker, Cy. Clk.

GRAND RAPIDS, MICH.—Bids are asked until March 17 for asphalt paving on Jefferson Ave. and Ottawa St. F. A. Twamley, Clk. Bd. Pub. Wks.

SAGINAW, MICH.—Bids are asked until March 17 for about 24,000 sq. yds. of asphalt and 8,500 sq. yds. of brick paving on Court and Hamilton Sts. A. Davies, Cy. Clk.——H. E. Terry, Cy. Engr., writes us that plans and specifications have been ordered for asphalt paving and brick gutters in Hoyt St.

HUNTINGTON, IND.—Bids are asked until April 11 for 16,000 sq. yds. of brick paving, 10,000 lin. ft. of curb, 9,000 ft. of 6-ft. brick sidewalk and 12,000 cu. yds. of earth excavation; cost, $30,000. Frank Guthrie, Cy. Engr.

INDIANAPOLIS, IND.—Bids are asked by the board of public works until March 10 for grading, etc., on Ringgold Ave., and until March 13 for grading, etc., on 33d St. and one alley.

LA CROSSE, WIS.—Frank Powell, Cy. Engr., informs us that it is proposed to pave about 4,000 sq. yds. with brick, at a cost of $1.63 per sq. yd.

MANITOWOC, WIS.—The question of paving Washington St. in the spring is being talked of.

DES MOINES, IA.—Bids are asked by the board of public works until March 20 for constructing all brick and cement sidewalks for one year.

SIOUX CITY, IA.—Bids are asked until March 14 for 7,500 sq. yds. of asphalt paving, according to reports. J. M. Lewis, Acting Cy. Engr.

KANSAS CITY, KAN.—A bill has been introduced in the senate for the macadamizing of a highway from Kansas City to Leavenworth, a distance of about 25 miles. Work to be done by convicts.

ST. LOUIS, MO.—Bids are asked until March 24 for grading on 16 streets and for preparing ground for paving on 16 streets. Robt. E. McMath, Pres. Bd. Pub. Improvements.

ANACONDA, MONT.—The committee has planned to pave portions of 10 streets this year.

BUTTE, MONT.—John G. Holland, Cy. Clk., informs us that it is proposed to pave in 10 districts with granite blocks, at a cost of $80,000. F. C. Bickenbach, Cy. Engr.

KALISPEL, MONT.—Bids are asked by the Fisher Creek Mining Co., Emmetsburg, Ia., for constructing a road about 25 miles long from Fisher River siding on the Great Northern Ry., to Bramlett Creek, according to reports. W. I. Branagan, Secy.

OLYMPIA, WASH.—Reports state that bills appropriating the following amounts for state roads have been passed by the senate: Road through the Cascades, $20,000; road from Wenatchee to the mouth of Twist River, $10,000; new road from Ventura to Vera Cruz, $15,000; road from Lyle to Washugal, $25,000; road from Montesano to Brookfield, $20,000; Buckley Road, $20,000; road from Cora to Sulphur Springs, $15,000.

SPOKANE, WASH.—The city commissioners have recommended the paving of nine streets; estimated cost, $246,969.

VISALIA, CAL.—Assemblyman McDonald will introduce a bill in the legislature for an appropriation to construct a road along the Merced River to Yosemite Valley.

BRIGHT, ONT.—Reports state that Bradford township is considering the question of purchasing a road roller.

MONTREAL, QUE.—The yearly appropriation bill includes $288,410 for paving. P. W. St. George, Cy. Surveyor.

ST. JOHN, N. B.—The board of works will purchase a steam drill, and may purchase a stone crusher, according to reports.

MANUFACTURING PLANTS.

ONECO, CONN.—The factory of the Oneco Mfg. Co. at this place, was burned, March 2; reported loss $30,000.

BROOKLYN, N. Y.—A new building, 365 × 150 ft., will soon be erected at the Navy Yard, to replace the machine shop recently destroyed by fire.

GLASSPORT, PA.—The Pittsburg Horse Shoe Co. is reported to be about to erect a new plant, 110 × 250 ft., at Glassport. W. C. Reitz, Pres.

ATLANTA, GA.—It is reported that the Neal Loan & Banking Co. has closed a contract for the construction of a new 2-story factory building 100 × 66 ft., on Trinity Ave., for the Southern Straw Hat Co.

MOBILE, ALA.—Cook & Lowrie, Montgomery, Ala., are reported to have received the contract for erecting a new cotton mill on the Duncan branch of the Mobile & Ohio R. R., to cost $22,000. Julian Watters is interested.

ROCKWOOD, TENN.—It is announced that the Roane Iron Co. will build a furnace at Rockwood with a capacity of 150 tons, to cost about $80,000.

MANILA, PHILIPPINES.—Bids will be received again, according to reports, for building a refrigerating plant and ice machine for the U. S. Army at Manila; estimated cost, $100,000. One set of proposals has been rejected. Col. J. G. C. Lee, Q. M., U.S.A., Pullman Bldg., Chicago, Ill.

GAS PLANTS.

ASTORIA, N. Y.—A bill is before the legislature to authorize the Astoria Light, Heat & Power Co. to manufacture gas for supplying the boroughs of Manhattan and Bronx.

UTICA, N. Y.—Anthony N. Brady, New York, has purchased the stock of the Equitable Gas & Electric Co. Casimer Tag, Pres., New York.

PHILADELPHIA, PA.—The United Gas Improvement Co., Drexel Bldg., has purchased property on Main St., Germantown, for a branch office and supply house. Wilson Bros. & Co., Archs., Drexel Bldg.

LOUISVILLE, KY.—The Kentucky Heating Co. has purchased a tract of land adjoining its works and proposes to erect new works which will double the present supply of natural gas.

SOMERSET, KY.—Reports state that the Standard Oil Co. will construct a refinery to cost about $20,000.

SCIO, O.—The Allegheny Oil & Gas Co. of Pittsburg purchased, March 1, 500 acres of oil land containing 23 producing wells from the United States Oil Co. of West Virginia, for $450,000.

ANDERSON, IND.—Reports state that a number of the gas companies throughout the gas belt are contemplating plans for improving their plants.

CORSICANA, TEX.—It is reported that Samuel Wood and associates propose to install a compressed air pumping plant capable of handling all the oil now produced in their field.

TORONTO, ONT.—Reports state that the Consumers' Gas Co. will construct a gas plant on the island to supply Hanlans' Point; estimated cost, $35,000.

NEW COMPANIES.—Athens & Sayre Gas Co., Athens, Pa.; $50,000, with $5,000 paid in; to supply gas for lighting only; F. A. Gillette, Treas.; C. W. Tidd, Athens, Pa.; J. A. Williams, Sayre, Pa.; M. S. Decker, Orange, N. J.

Epworth Gas Light Co., Epworth, Ia.; A. White, F. Harbaugh, H. M. Rohweder and others.

Ohio Valley Oil & Gas Co., Lafayette, Ind.; $1,000,000, with $10,000 paid in; to buy, lease and develop oil and gas territory; Arthur B. Proal, Harry F. Southard.

Burgess Heat, Light & Power Co., New York; $1,000,000, with $5,000 paid in; to manufacture, build, construct and buy machines for generating gas for fuel and power; Edward C. Burgess, A. A. Mitchell, William N. Wolfe.

Grand Island Gas Co., Grand Island, Neb.; $150,000; to erect or purchase gas or electric light works; C. B. Hensiger, N. S. Durnin, Heyward C. Leavitt.

Tennessee Gas Co., Tennessee, Tenn.; $1,000,000; to construct a plant.

Star Gasoline Co., Camden, N. J.; $150,000, with $1,000 paid in; E. V. Simmons, H. W. Selber, Geo. H. B. Martin.

U. S. Gas Consumers' Co., Trenton, N. J.; $100,000; to deal in apparatus for the manufacture or transmission of gas, oil or electricity; Samuel Chittick, Henry G. Balton and Charles E. Chittick, all of New York.

MISCELLANEOUS CONTRACTS.

FIRE ENGINE.—Nanimo, B. C.—Reports state that this town may purchase a steam fire engine.

TELEPHONE SYSTEM.—Hubbard, O.—The Union Telegraph & Telephone Co. has been granted a franchise.

FIRE ENGINE.—Windsor, N. S.—It is reported that $5,000 has been appropriated for a steam fire engine.

FIRE ALARM SYSTEM.—Hammonton, N. J.—The council has recommended an appropriation for an electric fire alarm system.

TELEPHONE FRANCHISE.—Ottumwa, Ia.—The council has granted a franchise to the Ottumwa Long Distance Telephone Co.

DRY DOCK.—Seattle, Wash.—The Seattle Dry Dock Co. is preparing for the construction of a floating dry dock about 350 ft. long.

PUMP AND GAS ENGINE.—Wellsville, N. Y.—Otis & Day want the address of a manufacturer of a pump and gas engine combined.

SUPPLIES.—Brantford, Ont.—Bids are asked until March 20 for furnishing lumber, cement and sewer pipe. W. G. Elliott, Chn. Bd. Wks.

LEVEE WORK.—West Memphis, Ark.—The legislature has authorized the St. Francis levee board to issue bonds for levee improvements.

TELEPHONE SYSTEM.—Springfield, O.—A franchise has been granted to the Central Union Telephone Co. to construct an underground system.

LUMBER.—Chicago, Ill.—Bids are asked by the board of education, 109 Randolph St., until March 17, for furnishing lumber, shingles, etc.

MAPS AND PLATS.—Pomeroy, O.—Bids are asked until April 12 for furnishing maps and plats of Meigs county. Clinton A. Roberts, County Audr.

TELEGRAPH SYSTEM.—Hagerstown, Md.—The Postal Telegraph Cable Co., New York, has applied to the council for a franchise, according to reports.

DOCKS.—Ottawa, Ont.—Reports state that J. R. Booth proposes to construct about 1,600 ft. of additional dockage, at Depot Harbor, this coming season.

DREDGE.—Rock Island, Ill.—Bids are asked until April 1 for a hydraulic dredge, as stated in our advertising columns. Capt. C. McD. Townsend, U. S. Engr.

TELEPHONE SYSTEM.—Beaverdam, Wis.—The council has authorized the Beaverdam Telephone Co. to construct and maintain a telephone system and exchange.

TELEPHONE LINES.—San Angelo, Tex.—It is reported that Rust Bros. will construct a line to Robert Lee, and also extend the Sterling City line to Colorado City.

FIRE BOAT REPAIRS.—New York, N. Y.—Bids are asked by the fire department, 157 East 67th St., until March 15 for repairing the fire boat "New Yorker."

DOCKS.—Cleveland, O.—The board of public works has been authorized by the board of control to prepare plans for new docks at Willson Ave., to cost about $40,000.

FIRE ALARM SYSTEM.—Washington, Pa.—Geo. D. Jenkins, Borough Engr., informs us that the borough of Washington will soon ask bids for a fire alarm system.

STEEL WALK.—Cape May, N. J.—It is reported that ex-Councilman John Halpin proposes to construct an elevated steel walk on the beach, to cost about $50,000.

TELEPHONE LINE.—Eureka, Cal.—The Senate on Feb. 18 passed the House bill appropriating $15,000 for a telephone line from Table Bluff to Salmon Creek in Humboldt county.

PARK WORK.—New Orleans, La.—Bids are asked by the park commissioners until March 18 for digging artificial lakes, grading and new driveway; excavations, about 130,000 cu. yds.

DITCH WORK.—Bellefontaine, O.—Wilbur A. Ginn, County Engr., writes us that the proposed Red Slough ditch improvement, to cost $40,000, will soon be readvertised and sold.

EXCAVATING.—Harvey, Ill.—Bids are asked by F. C. Austin Mfg. Co., Harvey, for handling 20,000 cu. yds. of surface soil and excavating 3,000 cu. yds., as stated in our advertising columns.

MAPS AND PLATS.—Columbus, O.—Bids are asked until March 11 for preparing maps and plats of the city of Columbus and townships of Franklin county. W. H. Halliday, County Audr. and Clk.

EXCAVATING.—Vicksburg, Miss.—Bids are asked until April 5 for excavating about 7,500,000 cu. yds. of earth for diverting the mouth of the Yazoo River, as stated in our advertising columns. Maj. J. H. Willard, U. S. Engr.

DREDGING.—New York, N. Y.—Bids are asked by the department of docks and ferries, Pier A, North River, until March 13 for about 10,000 cu. yds. of mud dredging and for 6,200 cu. yds. of crib dredging.

PARK PLANS.—Philadelphia, Pa.—The council has awarded first prize to Samuel Parsons, New York, at $750, for plans to lay out League Island Park, and the second prize to R. Oelrich, New York, at $250.

BUOY MAINTENANCE.—New York, N. Y.—Bids are asked until April 4 for maintaining buoys in certain harbors, bays and rivers for one year. Capt. E. M. Shepard, U. S. Engr., Tompkinsville (S. I.), N. Y.

TELEPHONE SYSTEM.—Rawlins, Wyo.—The Rawlins Electric Light & Fuel Co. has applied to the council for a franchise to construct a telephone system.——Cosgriff Bros. propose to construct a line to Fort Steele.

HARBOR WORK.—St. John, N. B.—Reports state that the city engineer has submitted plans and estimates for harbor improvements, including $235,000 for wharves, $250,000 for dredging and $28,000 for warehouses.

ENGINEERS' SUPPLIES, ETC.—New York, N. Y.—Bids are asked by the department of correction, 148 East 20th St., until March 16 for furnishing lumber, garden implements, etc., and until March 23 for engineers' supplies.

HEATING SYSTEM.—Red Oak, Ia.—Reports state that A. M. Miller, of the electric light company, will ask the council for a franchise to construct a plant and lay mains for a hot water heating system, to cost about $20,000.

DRAINAGE.—St. Paul, Minn.—The senate committee on drainage has presented a bill to the legislature to appoint a drainage commission and appropriate $100,000 for completing the work in the Red River Valley and other parts of the state.

TELEPHONE LINE.—Dawson, N. W. T.—Reports state that the McDonald's Bonanza Co., Ltd., has been incorporated in London, England, to develop Klondike property, and will construct a telephone line from Vancouver, B. C., to Dawson.

TELEPHONE WORK.—Baltimore, Md.—The Home Telephone System of Baltimore city has been sold to Middendorf, Oliver & Co. and George R. Webb, at $175,000, including franchises, etc. It is proposed to increase the system to 5,000 telephones.

RIVER WORK.—Sioux City, Ia.—We are informed that bids will probably be asked March 15 for straightening the channel of the Floyd River, length of new channel 1,500 ft., and for constructing a flushing dam; estimated cost, $25,000. J. M. Lewis, Cy. Engr.

WIRE NAIL MAKERS.—Birmingham, England.—Reports state that U. S. Consul Marshall Halstead, Birmingham, writes that he has received inquiries from Wales for the names of American wire-nail makers and manufacturers of wire for making nails.

TELEPHONE SYSTEM.—Kansas City, Mo.—An ordinance is before the council to grant a franchise to the Independent Telephone Co. to construct underground conduits in the district bounded by Third, Broadway, McGee and 12th Sts., and also on Main, Walnut and Grand Ave., from 12th to 14th Sts. G. F. Putnam, R. H. Keith and Charles Campbell are interested.

TELEPHONE WORK.—Boston, Mass.—Z. S. Holbrook, of Boston, and F. W. Breed, of Lynn, representing the Boston & New York Telegraph & Telephone Co., of New Jersey, propose to organize under Massachusetts laws, with a capital stock of about $100,000. Franchises have been asked for in Wooster and Providence, and will be immediately asked for in Springfield, New Haven and Hartford, according to reports.

TRANS-PACIFIC CABLE.—Washington, D. C.—Senator Frye has offered an amendment to the sundry civil bill authorizing the payment of a subsidy of not to exceed $100,000 a year for maintaining a telegraphic cable, to be completed to Hawaii by July 1, 1900, and to Manila Jan. 1, 1901; from the United States to Hawaii, Manila and Japan. The contract will be let to the lowest American bidder and subsidy runs 20 years. The government cable messages are to be sent free of cost, and commercial rates are to be 25 cts. a word to Hawaii, 75 cts. to Manila and $1.00 to Japan. Press rates are one-quarter of commercial rates.

CONTRACT PRICES.

WATER DEPARTMENT SUPPLIES.—St. Louis, Mo.—We are informed that the following bids were received Feb. 7, 1899, for furnishing certain supplies for the water department, laying pipe, etc.: Water pipe, 4,100 tons, American Pipe & Foundry Co., Chattanooga, Tenn., $18.80 a ton; special castings, 200 tons, Magnetite Foundry Co., St. Louis, $31 a ton; fire plugs, Pleuger & Henger Mfg. Co., St. Louis, underground plugs, 300, $20.40 each; double nozzle post plugs, 25, $60 each; top parts, 100, $15 each. Stop valves, Fulton Iron Works, St. Louis, 6-in., 100, $12.50 each; 12-in., 75, $44 each; 20-in., 3, $126 each; 30-in., one, $460. Laying water pipe, Pat'k O'Donnell, 6-in., 7,000 ft., 16 cts. a ft.; 12-in., 20,360 ft., 29 cts.; 20-in., 20,000 ft., 58 cts.; 30-in., 2,200 ft., $1.15; also same bidder on the following: Setting fire plugs, 76, $4; wrought iron straps, 3,000 lbs., 4 cts. a lb.; taking up 6-in. pipe, 5,800 ft., 3 cts. a ft; taking up 30-in. pipe, 50 ft., $1.00; setting a catchbasin, $28. Laying water pipe, etc., Mound City Construction Co., St. Louis, 6-in., 25,000 ft., 16 cts.; 12-in., 34,600 ft., 23 cts.; 20-in., 1,750 ft., 70 cts.; setting plugs, 170, $3.75 each; wrought iron, 5,000 lbs., 3½ cts. a lb.; taking up 6-in. pipe, 2½ cts. a ft.

SEWER WORK SUPPLIES.—Atlanta, Ga.—Our correspondent informs us that the following bids were received by the council Feb. 6 for furnishing certain sewer materials and for laying sewers, etc.:

Bids Received at Atlanta, Ga., Feb. 6, 1899, for Sewer Work Supplies.

Quantities.		Edwd. H. Post.	Gude & Walker.	G. H. Morrow & Co.	Chas. T. Hookway.	W. H. Harrison.	W. A. Hancock.	Davis Smith.
Brick	2,000,000 a 1,000.	$7.75	$7.75	$7.50	$10.50	$8.23	$7.35	$7.35
Rubble masonry	1,000 cu. yds.	2.00	1.50	.85	2.25	1.28	.70	.05
Cut stone	100 cu. ft...	.50	1.00	.01	.75	1.75	.50	.05
Cut flagging	200 sq. ft....	.55	.60	.01	.25	1.04	.25	.025
Lumber	20,000 ft. B.M.	15.00	8.00	1.00	20.00	8.40	6.00	.20
Excavation: 10 ft. and under..	20,000 cu. yds.	.17	.21	.20	.30	.17	.16	.17
15 ft. and under	20,000 " "	.20	.24	.23	.35	.21	.22	.24
20 " " "	2,000 " "	.40	.26	.10	.40	.18	.16	.05
25 " " "	100 " "	1.00	.30	.01	.50	.18	.25	.05
Concrete	50 " "	2.00	2.00	.05	2.50	1.19	.05	.05
Solid rock excavation	400 " "	1.00	1.00	.50	1.00	.82	.25	.16
Laying 8, 10 and 12-in.	15,000 lin. ft..	.03	.03	.05	.05	.06	.06	.05
15 and 18-in.	10,000 " "	.05	.05	.07	.07	.078	.06	.05
20, 22 and 24-in.	4,000 " "	.08	.07	.09	.10	.106	.04	.05
Total		$28,030	$28,660	$26,687	$40,000	$28,761	$25,328	$24,586

Sewer pipe, f. o. b. car Atlanta:	H. Stevens Sons Co.	Sciple Sons.	Randall Bros.		Double strength.
8-in.	$0.0810	$0.09	$0.1234		$0.1446
Y's	.3654	.405	.49		.5787
10-in.	.1170	.13	.184		.217
Y's	.5474	.585	.7358		.868
12-in.	.1530	.17	.23		.2712
Y's	.6894	.765	.92		1.0851
15-in.	.2250	.25	.3366		.3867
Y's	1.0134	1.125	1.3464		1.5348
18-in.	.3060	.34	.5049		.58
Y's	1.3770	1.530	2.0196		2.3022
20-in.	.4050	.45	.6415		.729
Y's	1.8234	2.025	2.5662		2.9169
22-in.	.4950	.55	.77		.875
Y's	2.2284	2.475	3.08		3.50
24-in.	.5850	.65	.9165		1.1167
Y's	2.6334	2.925	4.1242		5.12

Sewer Castings (delivered at work): J. M. Alexander & Co., manhole and catchbasin covers, $1.34 a 100 lbs.; valves, $4.65 each; and W. S. Withen, agent, manhole and catchbasin covers, $1.30 a 100 lbs; valves, $4 each.

BRICK PAVING.—Fulton, N. Y.—We are informed that the following bids were received by O. C. Breed, Village Engr., Feb. 23, for brick paving, etc., in Second St.; contract was awarded John Hendricks; engineer's estimate, $10,000:

Bids Received at Fulton, N. Y., Feb. 23, 1899, for Brick Paving in Second St.

Quantities.		Eugene Fee, Olean, N.Y.	F. Pidgeon, Saugerties, N. Y.	J. A. Osborn, Fulton, N. Y.	Edw. Quirk, Fulton, N. Y.	John Hendricks, Oswego, N.Y.	M. R. Grannis, Syracuse, N.Y.	J. W. Bustin, H. C. Allen, Syracuse.	T. H. Marvin, Fulton, N.Y.	C. J. Hookaway, Syracuse, N. Y.	Connors & True, Fulton, N.Y.
Excavation	300 cu. yds.	$0.30	$0.35	$0.25	$0.25	$0.25	$0.28	$0.15	$0.25	$0.30	$0.40
Embankment	1,200 " "	.65	.45	.80	.60	.35	.87	.34	.65	1.00	.80
Vit. brk pavement*	2,200 sq. "	2.20	2.53	2.50	2.05	1.88	2.15	2.09	2.10	2.35	2.25
Stone curb complete	5,000 lin. ft..	.50	.85	.62	.60	.55	.72	.62	.65	.45	.65
C'blestone pavemt.*	150 sq. yds.	.40	1.50	.60	.40	.60	.45	.50	.40	.80	.50
Sewer: Manholes.†	4 each...	30.00	75.00	28.00	25.00	30.00	30.00	20.00	35.00	20.00	30.00
Inlets, complete.	9 " ...	30.00	20.00	28.00	10.00	8.00	15.00	6.00	10.00	30.00	20.00
Pipe, layed, etc.:											
10-in.	250 lin. ft..	.35	.85	.32	.49	.27	.25	.23	.40	.30	.25
15-in.	940 " "	.42	.95	.45	.61	.39	.37	.40	.50	.45	.60
18-in.	300 " "	.50	1.10	.57	.75	.48	.47	.50	.60	.55	.75
10-in. c. i. pipe	2 tons....	24.00	120.00	60.00	30.00	26.00	33.00	27.00	30.00	35.00	35.00
Grading (6 street intersections)		120.00	50.00	90.00	100.00	12.50	77.00	42.00	50.00	15.00	25.00
Broken stone, in place, 1 cu. yd.		1.25	1.55	1.50	1.30	1.00	1.27	1.25	1.20	3.00	2.00
Total		$10,189	$14,058	$11,665	$10,347	$8,987	$10,827	$10,008	$10,416	$12,031	$11,869

*Including foundation. †Finished complete.

BRICK PAVING.—Bedford, Ind.—The council has awarded the contract for brick paving in two streets, to Porter Bowlin & Hadley, Tipton, Ind., at $2.80 a yd. for Townsend Gainesville brick.

MASONRY WALL.—Philadelphia, Pa.—The Fairmount Park commissioners have awarded the contract for the river wall on the west bank of the Schuylkill River to T. F. Riley at $2.13 a cu. yd. for the wall and at $1.75 for the concrete foundations. Robert Patton has secured the contract for rubble masonry work at $2.23 a cu. yd.

PAVING.—Minneapolis, Minn.—The following are the highest and lowest bids received Feb. 24, for paving with brick and with sandstone block; 37,000 sq. yds. of brick on 6-in. concrete foundation, and 34,000 yds. of sandstone block on sand foundation; Purington and Iowa brick to be used; G. W. Sublette, Cy. Engr.; E. R. Dutton, Asst. Cy. Engr.:

Bids Received at Minneapolis, Minn., Feb. 24, 1899, for Brick and Sandstone Paving.

Bidder.	Guarantee—Two years.—Cement filler.	Sand filler.	—None.—Cement filler.	Sand filler.	—Sandstone—Cement filler.	Sand filler.
J. W. Campbell, Des Moines, Ia.	$1.80¼	$1.60¾	$1.80	$1.68½	.....	.....
	1.79¼	1.68¾	1.79	1.67¾		
J. B. Canney, Minneapolis, Minn.	1.61¾	1.60½	1.54½	1.48½	$1.82	$1.70
	1.61	1.60	1.54	1.48	1.81½	1.69½
Fielding & Shepley, St. Paul, Minn.	1.61¾	1.60¾	1.54½	1.48½	1.82	1.70
	1.61	1.60	1.54	1.48	1.81½	1.69½
O. P. Herrick, Des Moines, Ia.	....	....	....	....	1.92	1.82

CEMENT AND BROKEN STONE.—Tybee Island, Ga.—We are informed that the following bids were received, Feb. 21, 1899, by Capt. Cassius E. Gillette, U. S. Engr., Savannah, Ga., for furnishing Portland cement and broken stone, delivered at Tybee Island, Ga., for use in constructing a 12-in. mortar battery, as advertised in Engineering News: Cement, 8,000 bbls., (1) being for delivery at wharf; (2) for delivery at switch; stone, (3) random rock delivered at switch, 4,200 tons; (4) small broken stone, delivered at wharf, 9,200 tons; (5) granolithic, delivered at wharf, 1,050 tons; (6) random rock, delivered at switch; (7) small stone, delivered at switch; (8) granolithic, delivered at switch; (9) total for stone reduced to switch delivery; Bowe & McKenzie, Augusta, Ga., (6) $2.34, (7) $1.96, (8) $2.57, (9) $30,559; Stewart Contracting Co., Columbia, S. C., (4) $2.10, (5) $2.10, (6) $2.00, (9) $31,975; Atlas Cement Co., New York, (1) $2.00½; Bond, Harrison & Co., Savannah, Ga., (4) $2.24, (5) $2.95; Venable Bros., Atlanta, Ga., (6) $2.15, (7) $2.30, (8) $3.30, (9) $33,655; John T. Coll, New York, (1) $2.27 and $2.04; Lehigh Portland Cement Co., Allentown, Pa., (1) $2.05; Emil Thiele, New York, (2) $2.95; National Granite Co., New York, (3) $2.49; (4) $1.68; (5) $1.68, (9) $30,568; Southeastern Lime & Cement Co., Charleston, S. C., (1) $2,415, (2) $2,415.

DRIVEWAY.—Longport, N. J.—The following bids were received by the county freeholders Feb. 21, 1899, for constructing the Longport driveway: Alvin P. Risley, 19 cts. a cu. yd. for excavation; $1.50 a car load for spreading gravel; 50 cts. a cu. yds. for spreading stone. Delaware River Quarry & Construction Co., 20 cts. a yd. for excavation; $6.50 a carload for spreading gravel; $1 a yd. for spreading stone; for entire work, $12,985. E. H. Camp, for entire work, $11,556. Quinlan & Leary, 25 cts. for excavation; $1.50 for spreading gravel; 55 cts. for spreading stone. Furnishing crushed stone bids were received as follows: Delaware River Quarry & Construction Co., $1.75 a cu. yd. Rocky Hill Stone Co., $1.91.

INDUSTRIAL NOTES.

THE COATESVILLE BOILER WORKS, Coatesville, Pa., is furnishing three 450-HP. boilers for Monterey, Mex.

KELLY & JONES, Pittsburg, have just made a large shipment of pipe to Peru. The firm is said to have orders for 65,000 brass valves.

THE SHOENBERGER STEEL CO., Pittsburg, has received a contract for 500 tons of tank plate, which will be delivered in the Netherlands.

THE FISHER GOVERNOR CO., Marshalltown, Ia., reports an exceptionally good year during 1898 and during January and February, 1899, with a considerable number of orders now in hand.

THE BIRMINGHAM MACHINE & FOUNDRY CO., Birmingham, Ala., has the contract for a 1,500-HP. Corliss engine for the new steel wire mill at Ensley, Ala. The company is now building a 700-HP. engine for the nail mill connected with the same plant.

FARRELL & HOPPER, 215 W. 125th St., New York, are announced in press reports to have received the contract for electrical machinery for the new dry-dock at Boston. The contract for this was awarded to O'Brien & Sheehan, New York, several weeks ago, at $857,200.

THE F. W. EMERSON MFG. CO., Rochester, N. Y., has just shipped to the Taft-Peirce Mfg. Co., Woonsocket, R. I., six of its largest drafting tables. The company has also recently supplied the United States Government, Remington Arms Co., Hilton Bridge Co., and the Buffalo, Rochester & Pittsburg Ry. Co., with some of its large blue-printing apparatus.

THE Q. & C. COMPANY, Chicago, announces that on March 4 it voluntarily advanced the wages of its entire factory force to amount equaling 10% advance, and it adds its hope that others will follow its example and thus allow labor to have its share of the present prosperity.

THE GARTLAND FOUNDRY CO., Cleveland, O., manufacturers of soft grey iron castings, has extended its plant by the addition of a molding room, 125 × 150 ft., and has also increased the capacity of its foundry department so as to employ 160 men, which number will be increased by 50 more at an early date.

THE KENNEY CO., 72 Trinity Place, New York, announces the appointment of the following agencies for the sale of its "Flushometers:" L. Wolff Mfg. Co., Chicago and Denver; Haines, Jones & Cadbury Co., Philadelphia; Ahrens & Ott Mfg. Co., Louisville, Ky.; N. O. Nelson Mfg. Co., St. Louis; National Supply Co., Toledo, and Cleveland, O; U. S. Water & Steam Supply Co., Kansas City, Mo.; U. S. Supply Co., Omaha; Detroit Lead Pipe & Sheet Lead Works, Detroit, Mich.; Western Supply Co., St. Paul and Minneapolis; Geo. B. Hawley, Cincinnati; Geo. E. Gilchrist, Boston; Fort Pitt Supply Co., Pittsburg; Roe & Conover, Newark, N. J; James Robertson Co., Ltd., Montreal.

THE UNITED STATES CAST-IRON PIPE & FOUNDRY Co. has been incorporated in New Jersey with a capital stock of $30,000,000. Poor & Greenough, New York, are said to have financed the scheme. The companies interested in the new incorporation, together with the daily melting capacity of the plant of each, is claimed to be as follows: Lake Shore Foundry, Cleveland, O., 350 tons; McNeal Pipe & Foundry Co., Burlington, N. J., 200 tons; National Foundry & Pipe Works (Ltd.), Scottdale, Pa., 300 tons; Buffalo Cast-Iron Pipe Co., Buffalo, N. Y., 150 tons; Ohio Pipe Co., Columbus, O., 175 tons; Addyston Pipe & Steel Co., having factories at Addyston, O., and Newport, Ky., with headquarters at Cincinnati, O., 600 tons; Dennis Long & Co., Louisville, Ky., 250 tons; American Pipe & Foundry Co., with factories at Chattanooga, Tenn., South Pittsburg, Tenn., Bessemer, Ala., Anniston, Ala., and Bridgeport, Ala., 1,060 tons. The daily capacity of the plants already controlled by the new company is therefore slightly over 3,000 tons. The Warren Foundry & Machine Co., of Phillipsburg, N. J., daily capacity of whose plant is 275 tons; R. D. Wood & Co., Camden, N. J., 300 tons; Donaldson Iron Co., Emaus, Pa., 100 tons; Reading Foundry Co., Reading, Pa., 140 tons; Glamorgan Pipe & Foundry Co., Lynchburg, Va., 75 tons; Radford Pipe & Foundry Co., Radford, Va., 125 tons; Utica Pipe Foundry Co., Utica, N. Y., 80 tons, and J. B. Clow & Sons' plant at Newcomerstown, O., 125 tons, are the principal plants not controlled by the new company. The combined daily capacity of these plants is about 1,500 tons. Options for the purchase of the plants of the Donaldson Iron Co., Glamorgan Pipe & Foundry Co., and Reading Foundry Co. are held by M. J. Drummond & Co., 192 Broadway, New York, who are largely interested in these plants.

NEW COMPANIES.—White Diamond Steel Co., Chicago, Ill.; $75,000; to manufacture steel; R. C. Bloomfield, G. W. Walker.

Richard Deeves & Son, New York; $50,000; to carry on a contracting and building business; Richard Deeves, John H. Deeves and Margaret Deeves.

Wolverine Motor Works, Grand Rapids, Mich.; $20,000, with all paid in; to manufacture engines, etc.; C. Sultz, G. L. Sultz, J. Love, E. E. Love, R. Love and others.

Crown Acetylene Gas Machine Co., Detroit, Mich.; $30,000, commencing with $25,900; J. D. Price, Jackson; B. F. Briscoe, W. P. Stevens, F. Woodruff.

Penn Yan Steam Heating Co., Penn Yan, N. Y.; $30,000, $5,000 paid in; C. Russell, C. T. Berkett, E. Donahue, Penn Yan; H. Russell, Albany, N. Y.

Union Iron & Steel Co., New York; $5,000,000, commencing with $50; W. F. Carey, W. Martin, W. G. Liebling, S. M. Cowpland, J. Speer.

Arizona Copper Syndicate, Ltd.; $500,000, commencing with $50,000; to operate and sell mines and mining properties; Joshua Brown, M. W. Geisinger, A. F. Hodges, A. M. Hodges, and Wm. H. McManus, all of New York.

Arsenical-Gold Reduction Co., Newark, N. J.; $100,000; to smelt and reduce gold and other ores; Eugene B. Hedden, W. Eugene Thatcher, Frank L. Luff, East Orange.

New Jersey Brick Co., Trenton, N. J.; $10,000; to manufacture bricks; George E. Fell, George F. Fell, Nelson J. Petty.

Mangold Dredging Co., New York; $300,000, commencing with $1,000; to develop and operate mineral lands; J. C. Platt, Montclair, N. J.; C. S. Houghton, Boston.

Clear Water Mining & Trading Co., New York, N. Y.; $40,000; to carry on a mining business in Alaska; E. C. Bartlett and A. Beverly Smith, Brooklyn, N. Y.; John Nieder and F. C. Blauvelt, Newark, N. J.; C. I. McLaughlin, New York.

International Contract Co., Louisville, Ky.; $10,000; to build and operate electric light plants, street railways, water-works, telephone and telegraph lines, etc.; F. H. Beeman, Peter Arlund and Lloyd Bloomfield.

New York & New England Sanitation Co., Portland, Me.; $300,000, commencing with $300; to manufacture appliances for disinfection and sterilization; F. C. Tinslow, Henry A. Adams, W. A. Prendergast, New York.

New England Motor Carriage Co., Portland, Me.; $1,000,000, commencing with $250; to manufacture motor carriages; W. P. Burnell, F. M. Young, Boston; A. N. Goodhue, Somerville, Mass.; C. A. Sherry, Waltham, Mass.; W. A. Ingham, Lowell, Mass.

Buffalo Structural Steel Co., Buffalo, N. Y.; $30,000; to manufacture steel and iron; Casper Teiper, John G. Wickser, Mrs. G. Houck, and Avery C. Wolfe, of Buffalo.

Bridgeport Boiler Works Co., Bridgeport, Conn.; $10,000; to deal in steam-heating appliances; E. J. Morgan, E. C. Spaigo, H. B. Smith.

Mail Delivery Notice.

Special efforts are made to deliver our paper to its readers each week at the earliest possible moment. The largest binding and mailing establishment in New York begins work on Engineering News early each Wednesday evening, and all papers for Boston, Philadelphia and Washington are usually in the New York post-office by midnight; all Brooklyn and New York city papers by 3 o'clock—in ample time for the first delivery Thursday morning. The entire edition, including foreign copies, is in the mail soon after 6 o'clock Thursday morning. If your paper is not received promptly we advise that you make a complaint to your local post-office officials.

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